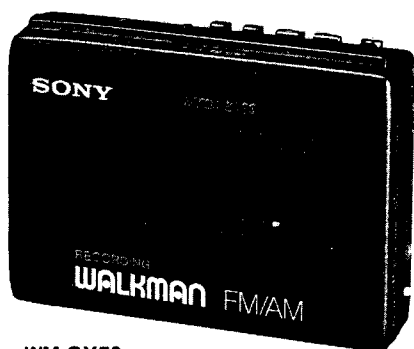


WM-GX50/GX51

SERVICE MANUAL

*AEP Model
UK Model
Saudi Arabia Model*



WM-GX50



WM-GX51

Model Name Using Similar Mechanism	WM-BF608
Tape Transport Mechanism Type	MF-WMBF608

SPECIFICATIONS

WM-GX50

Radio section

Frequency range

Where purchased	FM (MHz)	AM (kHz)
In Italy	87.5—108	526.5—1606.5
In Germany	87.6—107	531 —1602
In Saudi-Arabia	87.6—107	530 —1605
In other countries	87.6—107.9	531 —1602

Intermediate frequency FM: 28.6 MHz 150 kHz

AM: 55 kHz

Power requirements

1.5 V DC

One R6 (size AA) battery

Rechargeable battery (NC-6WM) (not supplied)

DC IN 1.5 V jack accepts

Sony AC-E15L AC power adaptor

(not supplied) for use on:

European and Saudi-Arabia model	220 V AC, 50 Hz
Other model	120 V AC, 60 Hz 220 V AC, 50 Hz

Battery life (Approximate hours)

	Playback	Radio reception	Recording from the built-in radio
Sony AM3 (N)	5 hrs.	7 hrs.	2 hrs.

Dimensions

Approx. 108.6 × 78.8 × 35.2 mm (w/h/d)

(4 × 3 1/4 × 1 1/8 inches)

incl. projecting parts and controls

Weight

Approx. 223 g (7.9 oz) not incl. battery and other accessories

Accessories supplied

Stereo headphones (1)
Stereo microphone (1)
Microphone stand (1)
Carrying case (1)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Optional accessories*

AC power adaptor AC-E15L
Car battery cord DCC-E115L
Rechargeable battery NC-6WM
Battery charger BC-7L

* Your dealer may not handle these optional accessories. Please ask the dealer for detailed information.

—Continued on page 2—



RADIO CASSETTE CORDER
SONY®

WM-GX51

Radio section
Frequency range

Where purchased	FM (MHz)	AM (kHz)
In Italy	87.5—108	522—1611
In Germany	87.5—108	531—1602
In Saudi-Arabia	87.5—108	531—1602
In other countries	87.5—108	531—1602

Intermediate frequency

FM: 10.75 MHz

AM: 450 kHz

Antenna

FM: Headphones cord antenna

AM: Built-in ferrite bar antenna

Recording section

Recording system

4-track 2-channel stereo

Input

Microphone input (stereo minijack)

(PLUG IN POWER) sensitivity 0.77 mV (–60 dB) for lower impedance microphone

Tape player section and general

Frequency response (DOLBY NR off)

40 Hz—15 kHz (with the PB EQ selector set to NORMAL or CrO₂/METAL)

Output

Headphones (stereo minijack)

Load impedance 8—300Ω

Power output

5 mW + 5 mW at DC operation, 16Ω

Power requirements

1.5 V DC

Rechargeable battery

One R6 (size AA) battery

DC IN 1.5 V jack accepts:

- Sony AC-E15L AC power adaptor (not supplied) available in the United Kingdom for use on 240 V AC, 50 Hz available in other European countries for use on 220 V AC, 50 Hz available in other countries for use on 100—120 V AC or 220—240 V AC, 50 or 60 Hz
- Sony DCC-E115L (not supplied) for use with 12 V car battery

Battery life (hours)

Battery	Playback	Radio reception	Recording from the built-in radio
Sony AM3 (N)	Approx. 5	Approx. 7	Approx. 2

For maximum performance we recommend the use of alkaline batteries.

Dimensions

Approx. 108.6 × 78.8 × 35.2 mm(w/h/d)

(4³/₈ × 3¹/₈ × 1⁷/₁₆ inches)

incl. projecting parts and controls

Weight

Approx. 226 g (8.0 oz) not incl. battery and other accessories

Accessories supplied

Lithium battery (CR2016) (1) Microphone (1)
Microphone stand (1) Stereo headphones (1)
Carrying case (1)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Optional accessories

AC power adaptor AC-E15L

Battery charger BC-7L

Rechargeable battery NC-6WM,

Car battery cord DCC-E115L

Lithium battery CR2016

Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

WARNING !!

ADVARSEL!

Lithiumbatteri – Eksplosionsfare
Udskiftning må kun foretages
af en sagkyndig, og som
beskrevet i servicemanualen.

LITHIUM BATTERY

SHOULD ONLY BE CHANGED BY TECHNICAL PERSONNEL. THERE IS A RISK FOR EXPLOSION AT A WRONG HANDLING.

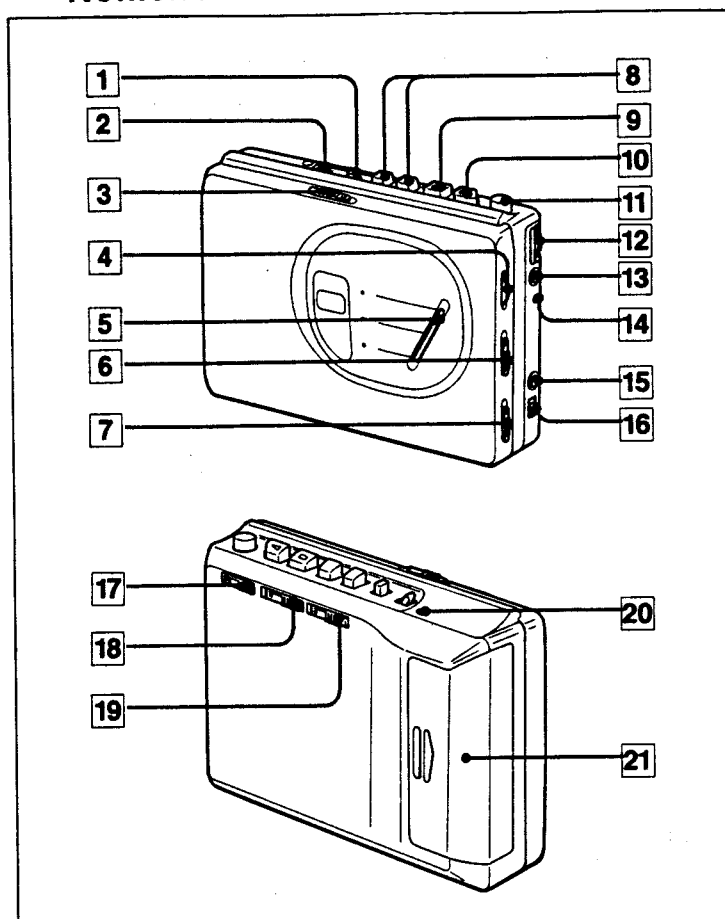
SECTION 1 GENERAL

WM-GX50/GX51

WM-GX50

This section is extracted from
instruction manual.

A Parts Identification Nomenclature

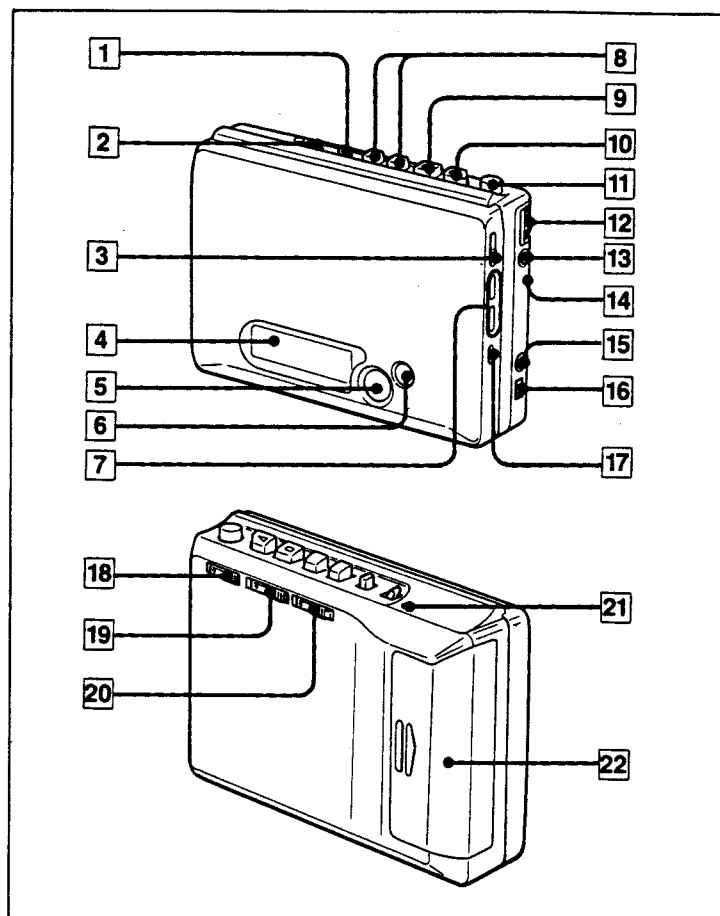


Parts Identification

(See illustration [A].)

- 1 DIR (tape transport direction change) button
- 2 $\Rightarrow \Leftarrow$ MODE (tape transport) selector
- 3 FM SENS (LOCAL/DX) selector
- 4 Tuning control
- 5 Dial scale
- 6 BAND (FM/AM) selector
- 7 RADIO (FM MONO/FM ST/TAPE (RADIO OFF) selector
- 8 $\ll / \gg$ (fast winding) button
- 9 ■ STOP/EJECT button
- 10 ► PLAY button
- 11 ● REC (record) button
- 12 VOLUME control
- 13 $\bigcirc$ PHONES (headphones) jack
- 14 BATTERY indicator
- 15 MIC (microphone) (PLUG IN POWER) jack
- 16 MEGA BASS (NORM/MID/MAX) selector
- 17 PB EQ (CrO₂/METAL NORMAL) selector
- 18 DOLBY NR (PB) (Dolby noise reduction)(ON/OFF) selector
- 19 ISS (Interference Suppress Switch) selector
- 20 DC IN 1.5 V (external power input) jack
- 21 Battery compartment lid

A Parts Identification Nomenclature



Parts Identification

(See illustration [A].)

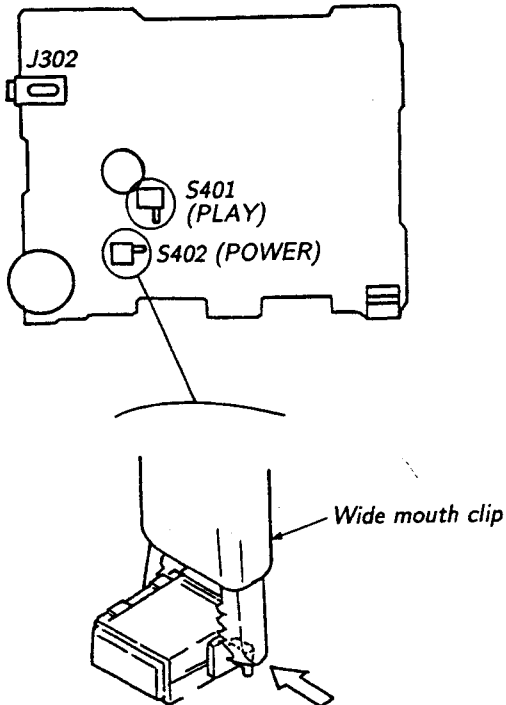
- 1 DIR (tape transport direction change) button
- 2 ⇌ MODE (tape transport) selector
- 3 FM ST/MONO (stereo/monaural) selector
- 4 Display window
- 5 PRESET TUNE button
- 6 RADIO ON/OFF BAND button
- 7 +SCAN - buttons
- 8 ◀/▶ (fast winding) buttons
- 9 ■ STOP/EJECT button
- 10 ▶ PLAY button
- 11 ● REC (record) button
- 12 VOLUME control
- 13 ☎ PHONES (headphones) jack
- 14 BATTERY indicator
- 15 MIC (microphone) (PLUG IN POWER) jack
- 16 MEGA BASS (NORM/MID/MAX) selector
- 17 ENTER button
- 18 PB EQ (CrO₂/METAL NORMAL) selector
- 19 DOLBY NR (PB) (Dolby noise reduction) (ON/OFF) selector
- 20 ISS (Interference Suppress Switch) selector
- 21 DC IN 1.5 V (external power input) jack
- 22 Battery compartment lid

Service Notes

How to check the operation

When audio board has been removed from mechanical deck. Depress the PLAY (▶) button to turn ON the S402 (POWER) and S401 (PLAY).

AUDIO BOARD - Component side -



Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on Chip Component Replacement

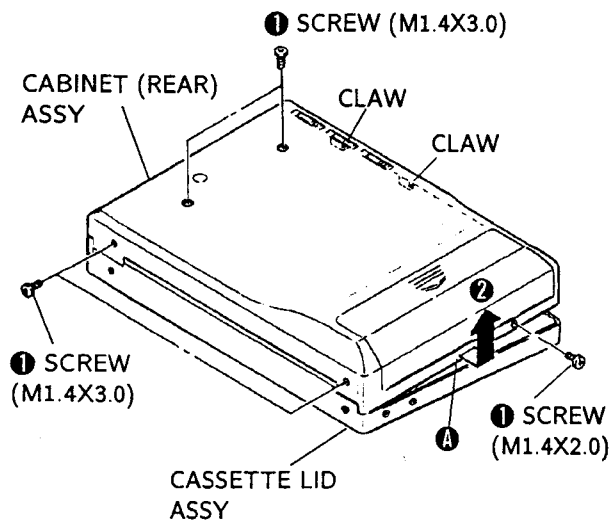
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

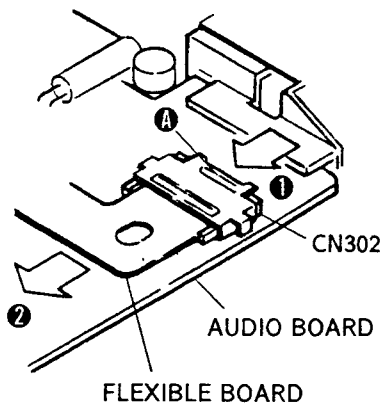
2-1. CABINET (REAR) ASSY REMOVAL

1. Remove five screws marked ❶.
2. Open the cassette lid assy.
3. Pull a part (marked A) of cabinet (rear) assy slowly toward outside in order to remove the claw and lift up it to direction of arrow ❷.



2-2. FLEXIBLE BOARD REMOVAL

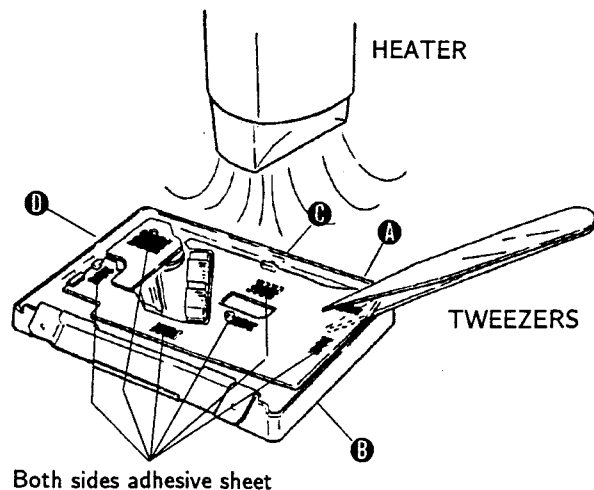
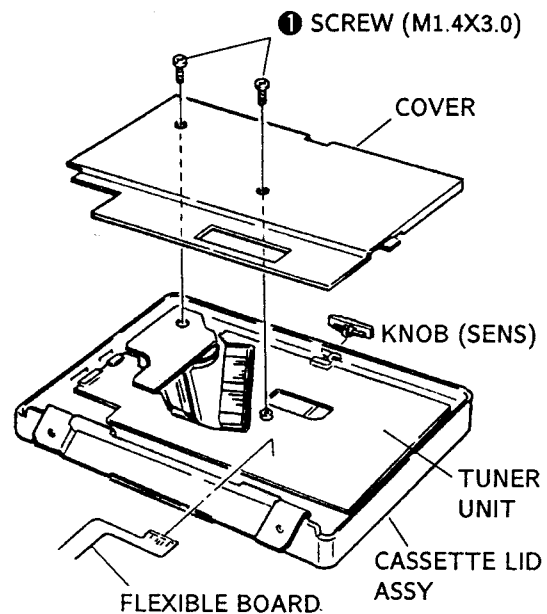
1. Push a part (marked A) of CN302 toward direction of arrow ❶.
2. Pull the flexible board toward direction of arrow ❷.



2-3. TUNER BOARD REMOVAL

(WM-GX50)

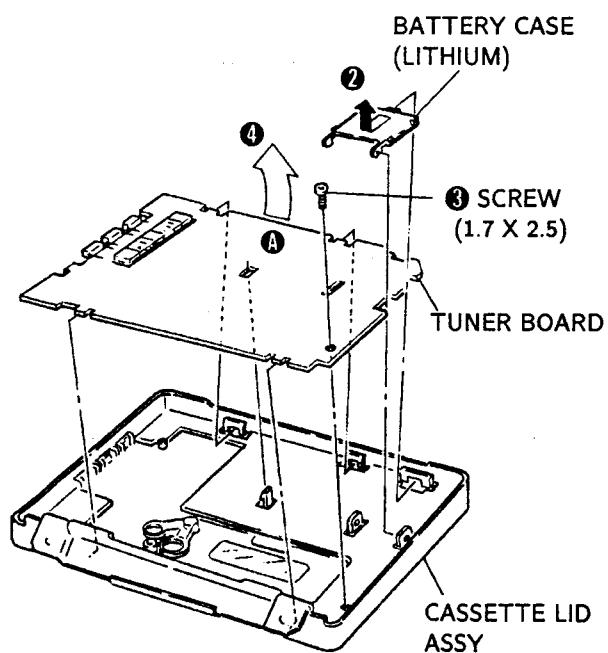
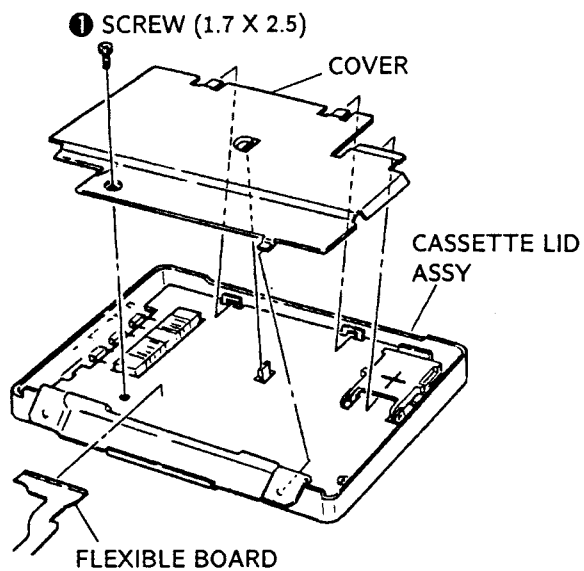
1. Remove two screws marked ❶.
2. Remove the cover.
3. Remove the knob (SENS).
4. Warm up A to D portion by heater and move it slowly by tweezers.



2-3. TUNER BOARD REMOVAL

(WM-GX51)

1. Remove screw marked ❶.
2. Remove the cover.
3. Slide the battery case (LITHIUM) horizontally and lift up toward direction of arrow ❷.
4. Remove screw marked ❸.
5. Lift up a part (marked A) tuner board toward direction of arrow ❹.



SECTION 3 ADJUSTMENTS

3-1. Mechanical measurements

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :

playback head	pinch roller
capstan	rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (1.3V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	22 - 38 g-cm 0.31 - 0.52 oz-inch
FWD Back Tension		1.0 - 3.0 g-cm 0.02 - 0.04 oz-inch
REV	CQ-102RB	22 - 38 g-cm 0.31 - 0.52 oz-inch
REV Back Tension		1.0 - 3.0 g-cm 0.02 - 0.04 oz-inch
FF	CQ-201B	more than 50 g-cm more than 0.7 oz-inch
REW		more than 50 g-cm more than 0.7 oz-inch

Tape Tension Measurement

Mode	Torque meter	Meter reading
FWD	CQ-403A	more than 50 g more than 1.77 oz
REV	CQ-403R	more than 50 g more than 1.77 oz

3-2. ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Power supply voltage : 1.3V
2. Switch position

FM switch	: ST
DOLBY switch	: OFF
DBB switch	: NORM

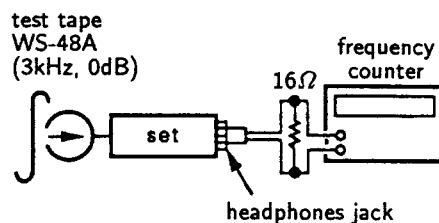
Cassette Section

TEST TAPE

Type	Signal	Used for
WS-48A	3kHz, 0dB	Tape Speed Adjustment

Tape Speed Adjustment

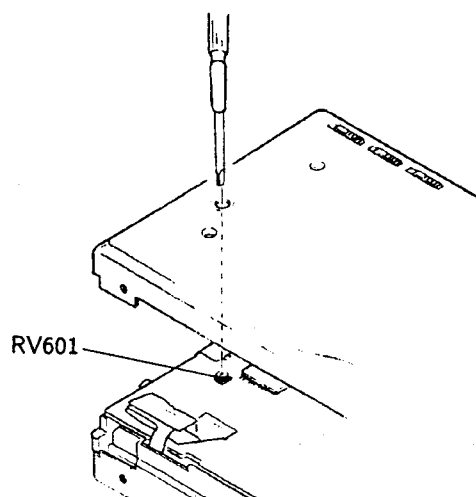
Procedure :



1. Playback WS-48A (tape center portion) in FWD mode.
Adjust the RV601 so that the frequency counter read $3,000\text{Hz} \pm 30\text{Hz}$.
2. Playback WS-48A (tape center portion) in REV mode.

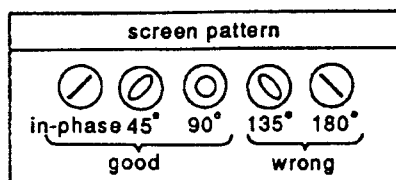
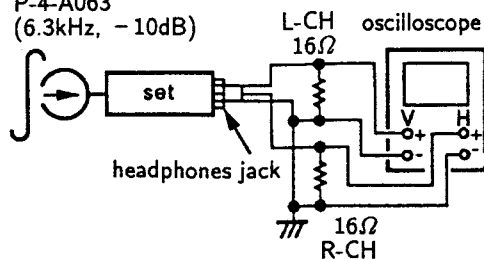
Confirm that the reading of frequency counter is with 2.5% from the reading in step 1.

Adjustment Parts Location Diagram



2. Playback check

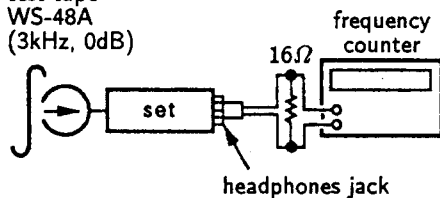
test tape
P-4-A063
(6.3kHz, -10dB)



Tape Speed Adjustment

Procedure :

test tape
WS-48A
(3kHz, 0dB)



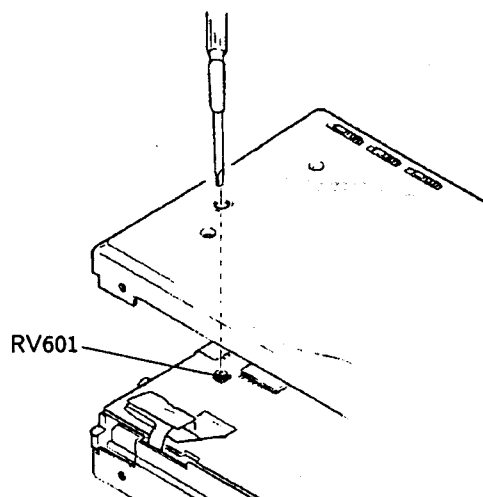
1. Playback WS-48A (tape center portion) in FWD mode.

Adjust the RV601 so that the frequency counter read $3,000\text{Hz} \pm 30\text{Hz}$.

2. Playback WS-48A (tape end portion) in REV mode.

Confirm that the reading of frequency counter is within 2.5% from the reading in step 1.

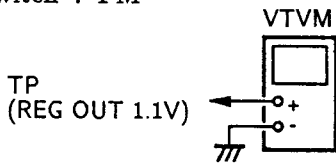
Adjustment Parts Location Diagram



Tuner Section ONLY for WM-GX50

Power Supply Voltage Adjustment

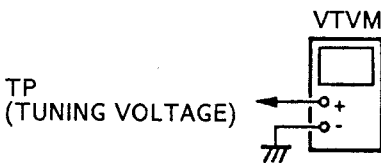
Function switch : RADIO FM ST
Band switch : FM



Adjustment part	Reading on VTVM
RV53	1.1 ± 0.01V

Tuning Voltage Adjustment

Function switch : RADIO FM ST
Band switch : FM

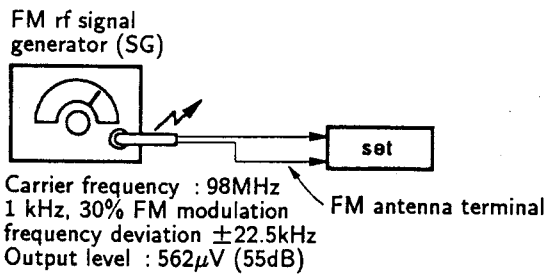


- Repeat the procedure in each adjustment several times since RV (f min) affects RV (f max) and RV (f max) affects RV (f min). This adjustment should end with the final adjustment of RV (f max).

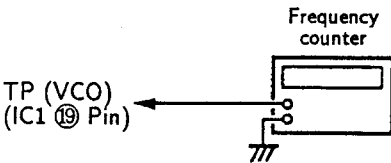
Pointer position	Adjustment part	Reading on VTVM
f minimum	RV (fmin 1.0V)	1V±0.01V
f maximum	RV (fmax 9V)	9V±0.01V

Note :
RV (f min), RV (f max) is built-in the RV51 block.

FM VCO Adjustment



Function switch : RADIO FM ST
Band switch : FM



- Tune the set to 98 MHz.

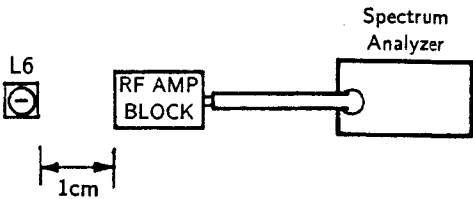
Adjustment part	frequency counter
L5	37.95kHz±0.03kHz

FM 2nd OSC Adjustment

Function switch : RADIO FM ST
Band Switch : FM
Adjustment part : L6

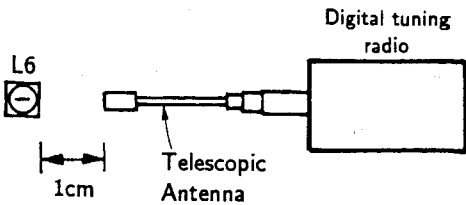
- How to adjust FM 2nd. oscillator using the spectrum analyzer.

1. Prepared the spectrum analyzer and RF amplifier as shown in below drawing.
2. Set the switch to radio FM stereo position of WM -GX50.
3. Put the RF amplifeir block which connected to spectrum analyzer to just beside and one centi-meter away from L6.
4. Adjust L6 to bring up maximum waveform at 57.3MHz position in spectrum analyzer.

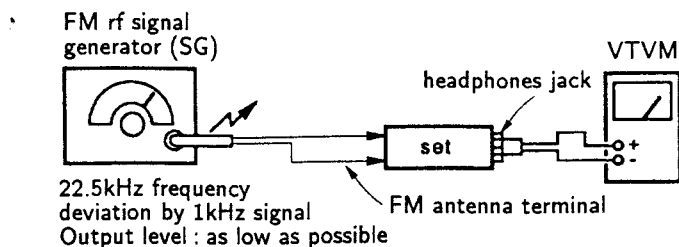


- How to adjust FM 2nd. oscillator if the spectrum analyzer is not available.

1. Prepared built-in SSB digital tuning radio such as SONY ICF-2001 or equivalents.
2. Tuned 57.3MHz ± 0.1MHz at the SSB mode of built-in SSB digital tuning radio.
3. Set the switch to radio FM stereo position of WM -GX50.
4. Put the telescopic antenna of built-in SSB digital tuning radio to just beside and one centi-meter away from L6 as show in below drawing.
5. Digital tuning radio will be reproduce peep sound.
6. Adjust L6 to fade out or minimize peep sound.



FM Frequency Coverage Adjustment



Function switch : RADIO FM ST

Band switch : FM

- Repeat the procedure in each adjustment several times since L3 affects CT3 and CT3 affects L3. This adjustment should end with the final adjustment of CT3.

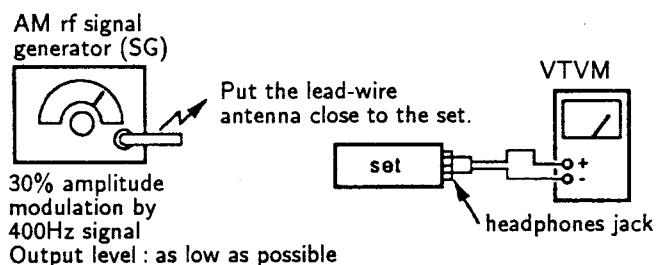
Pointer position	SG frequency	Adjustment part	Reading on VTVM
f minimum	(86.5 MHz) [87.35MHz] <87.35MHz>	L3	maximum
f maximum	(109.5 MHz) [107.8MHz] <108.25MHz>	CT3	maximum

() : AEP model only

[] : German, Saudi Arabia model only

< > : Italian model only

AM Frequency Coverage Adjustment



Function switch : RADIO FM ST

Band switch : AM

- Repeat the procedure in each adjustment several times since L1 affects CT1 and CT1 affects L1. This adjustment should end with the final adjustment of CT1.

Pointer position	SG frequency	Adjustment part	Reading on VTVM
f minimum	515kHz <516.5kHz>	L1	maximum
f maximum	1680kHz <1631.5kHz>	CT1	maximum

< > : Italian model only

AM Tracking Adjustment

Function switch : RADIO FM ST

Band switch : AM

- Repeat the procedure in each adjustment several times since L2 affects CT2 and CT2 affects L2. This adjustment should end with the final adjustment of CT2.

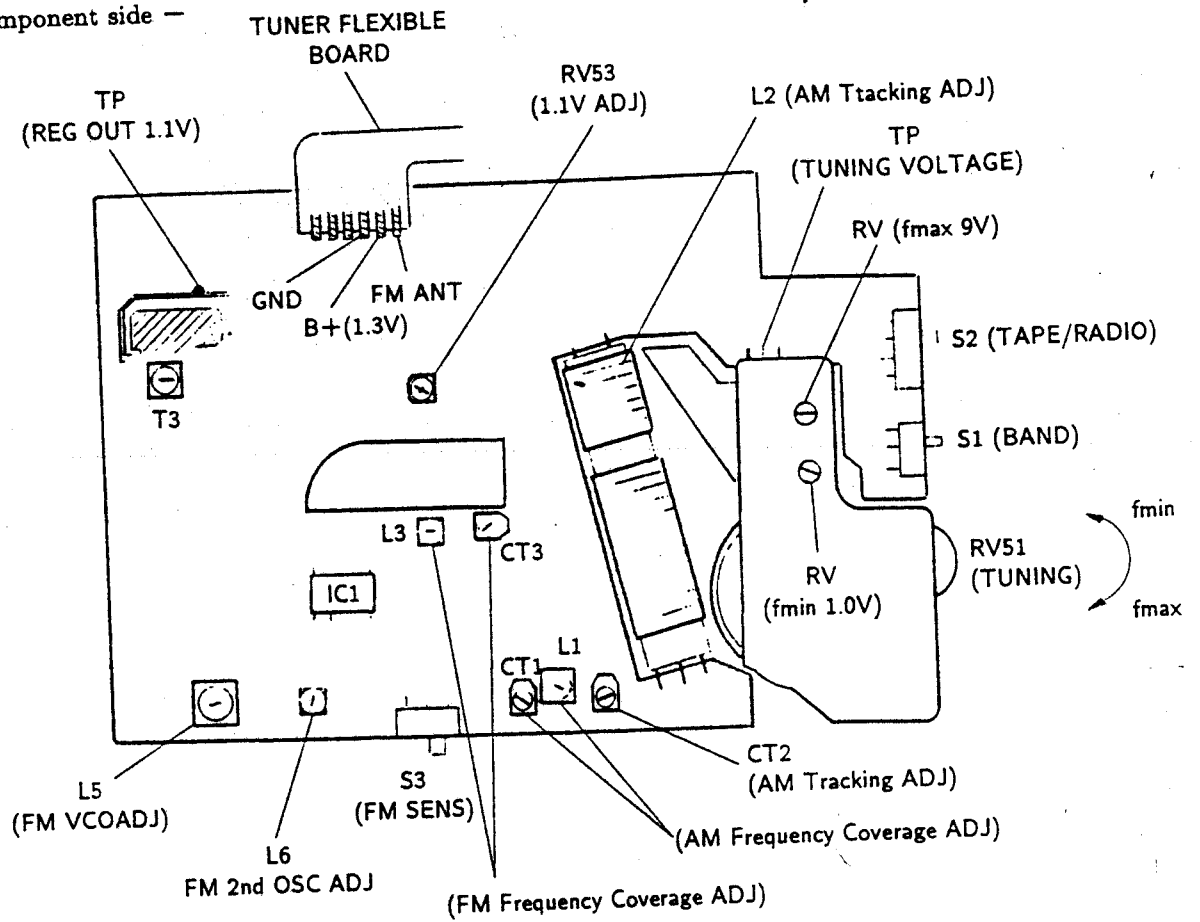
NOTE :

Test equipment is settled as same as AM Frequency coverage adjustment.

SG and set frequency	Adjustment part	Reading on VTVM
620kHz	L2	maximum
1400kHz	CT2	

Adjustment Location

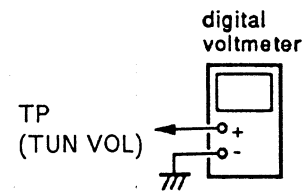
— component side —



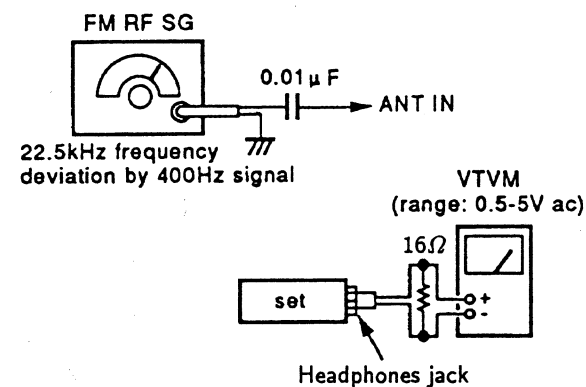
Tuner Section ONLY for WM-GX51

FM SECTION

BAND switch : FM



FM TUNING VOLTAGE ADJUSTMENT	
Adjust for following values on digital voltmeter.	
Display indication	FM 87.5MHz
Digital voltmeter reading	2.7V $\pm$ 0.02V
Adjustment part	L3

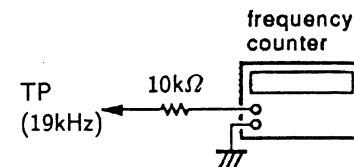


- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

FM TRACKING ADJUSTMENT		
Adjust for maximum reading on VTVM.		
Display indication	FM 87.5MHz	FM 108.0MHz
SG frequency	87.5MHz	108.0MHz
Adjustment part	L2	CT2

VCO Adjustment

BAND switch : FM

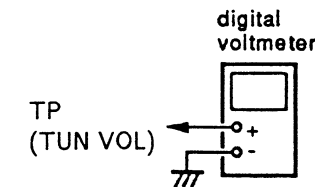


Procedure :

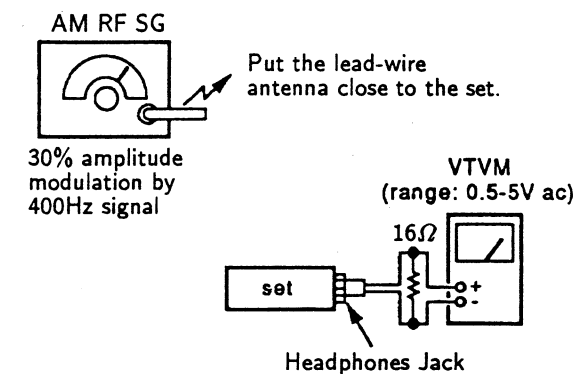
1. Connect an electrolytic capacitor 1μF between TP (DET OUT) and ground.
2. Adjust RV1 for 19 $\pm$ 0.02kHz on the counter.
3. Remove electrolytic capacitor connected in step 1.

AM SECTION

BAND switch : AM



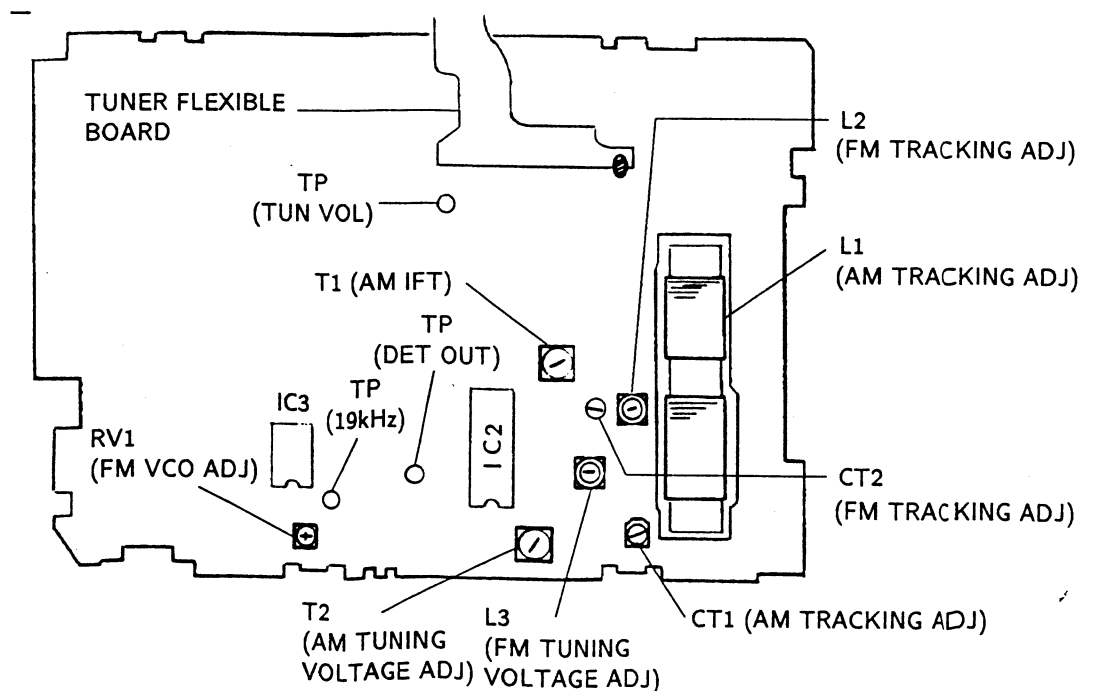
AM TUNING VOLTAGE ADJUSTMENT	
Adjust for following values on digital voltmeter.	
Display indication	AM 531kHz
Digital voltmeter reading	1.1V $\pm$ 0.02V
Adjustment part	T2



Adjustment Location

TUNER BOARD

— Component Side —



- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

AM TRACKING ADJUSTMENT		
Adjust for maximum reading on VTVM.		
Display indication	AM 621kHz	AM 1,395kHz
SG frequency	621kHz	1,395kHz
Adjustment part	L1	CT1

AM IF ALIGNMENT	
Adjust for for a maximun reading on VTVM.	
SG frequency	455kHz
Adjustment part	T1

SECTION 4 DIAGRAMS

4-1. BLOCK DIAGRAM (AUDIO SECTION)

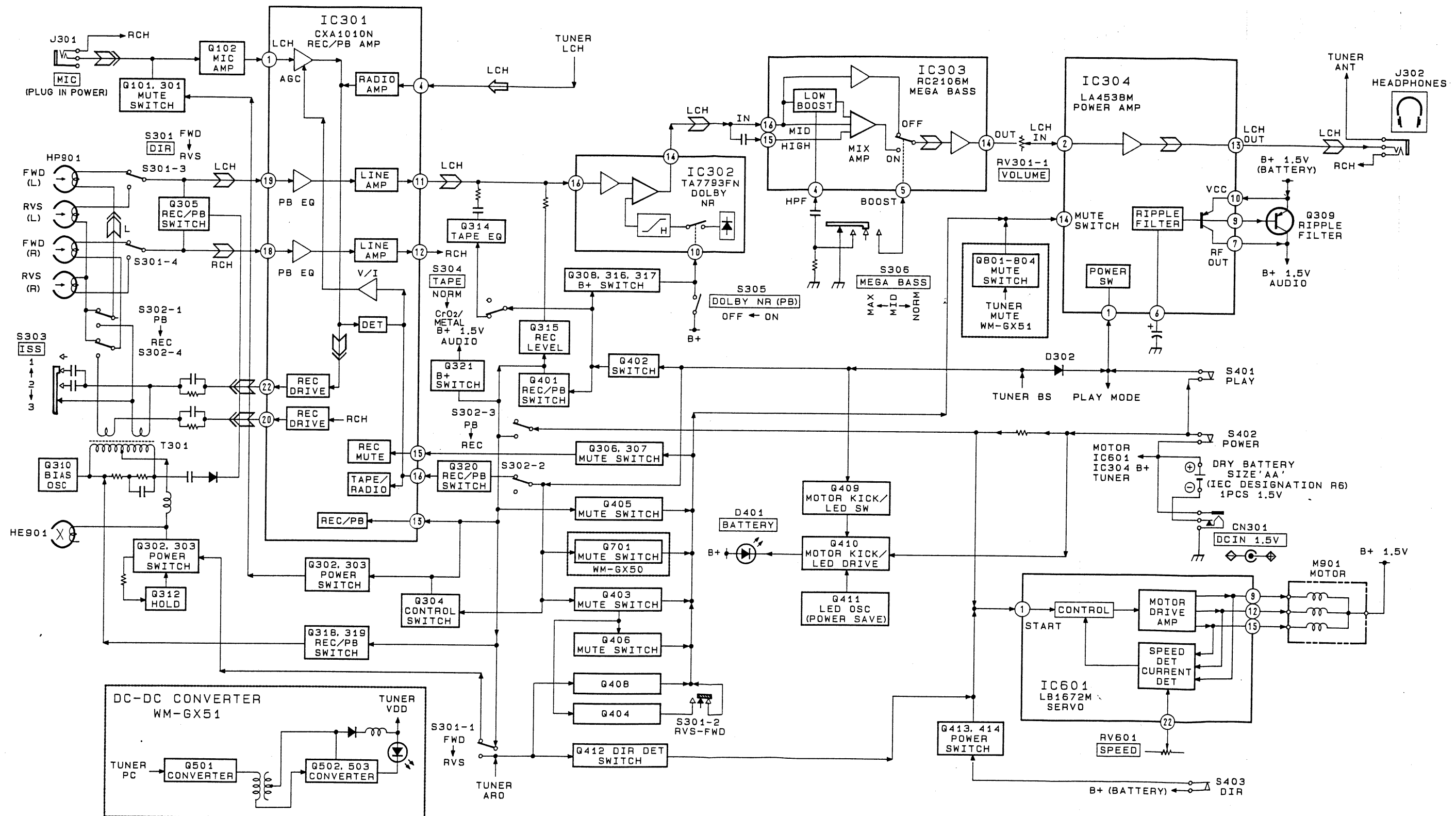
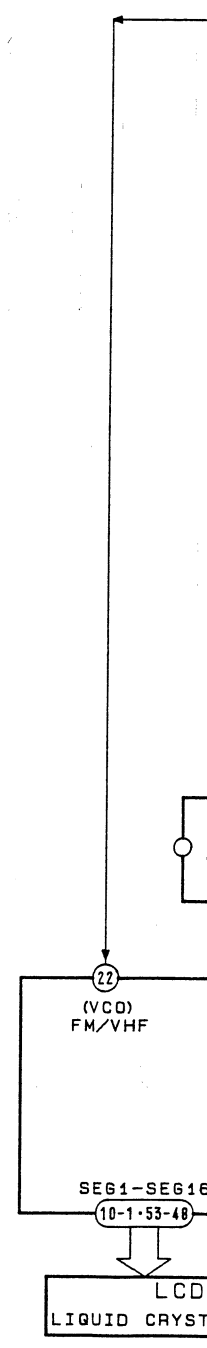
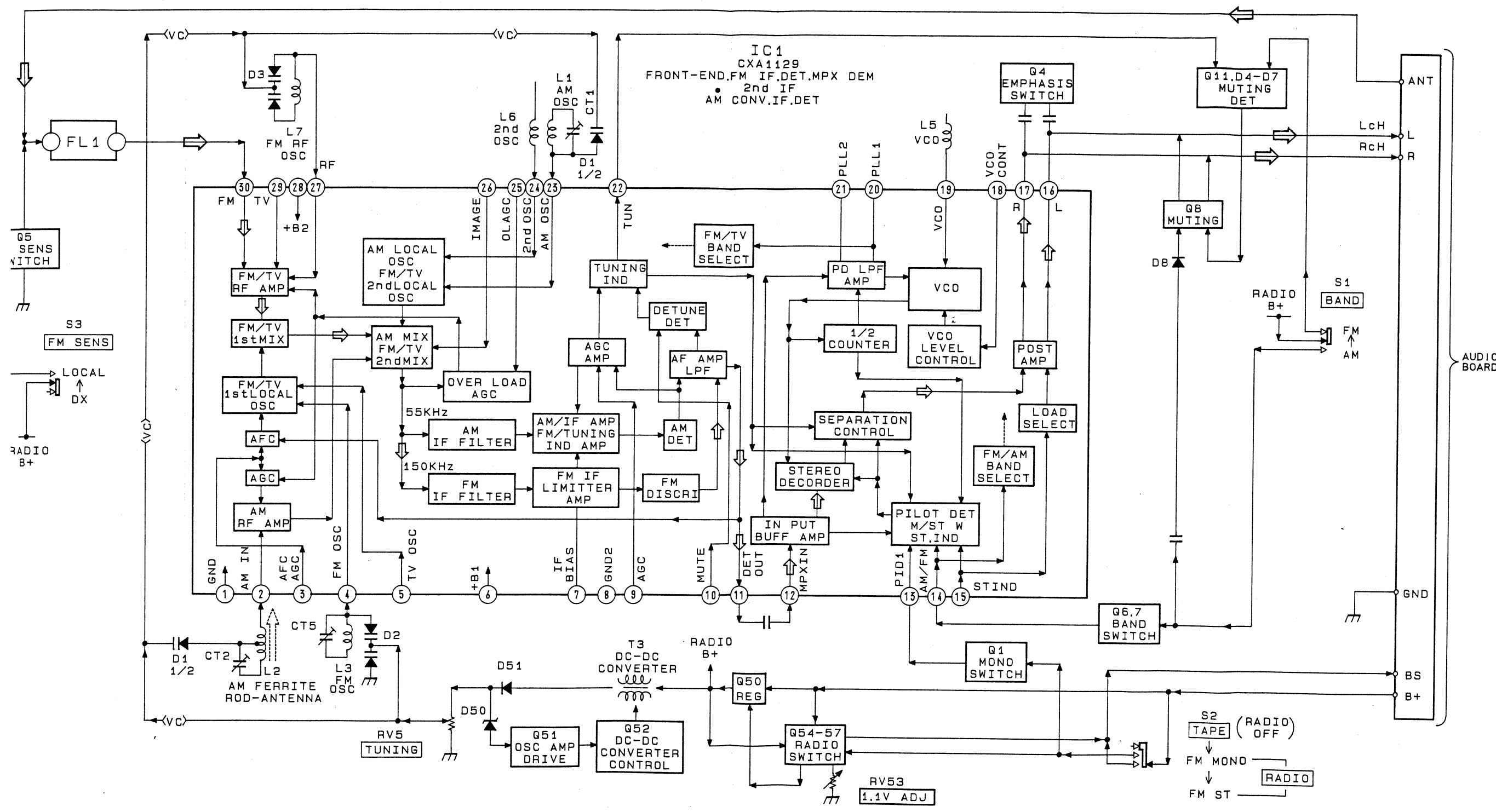
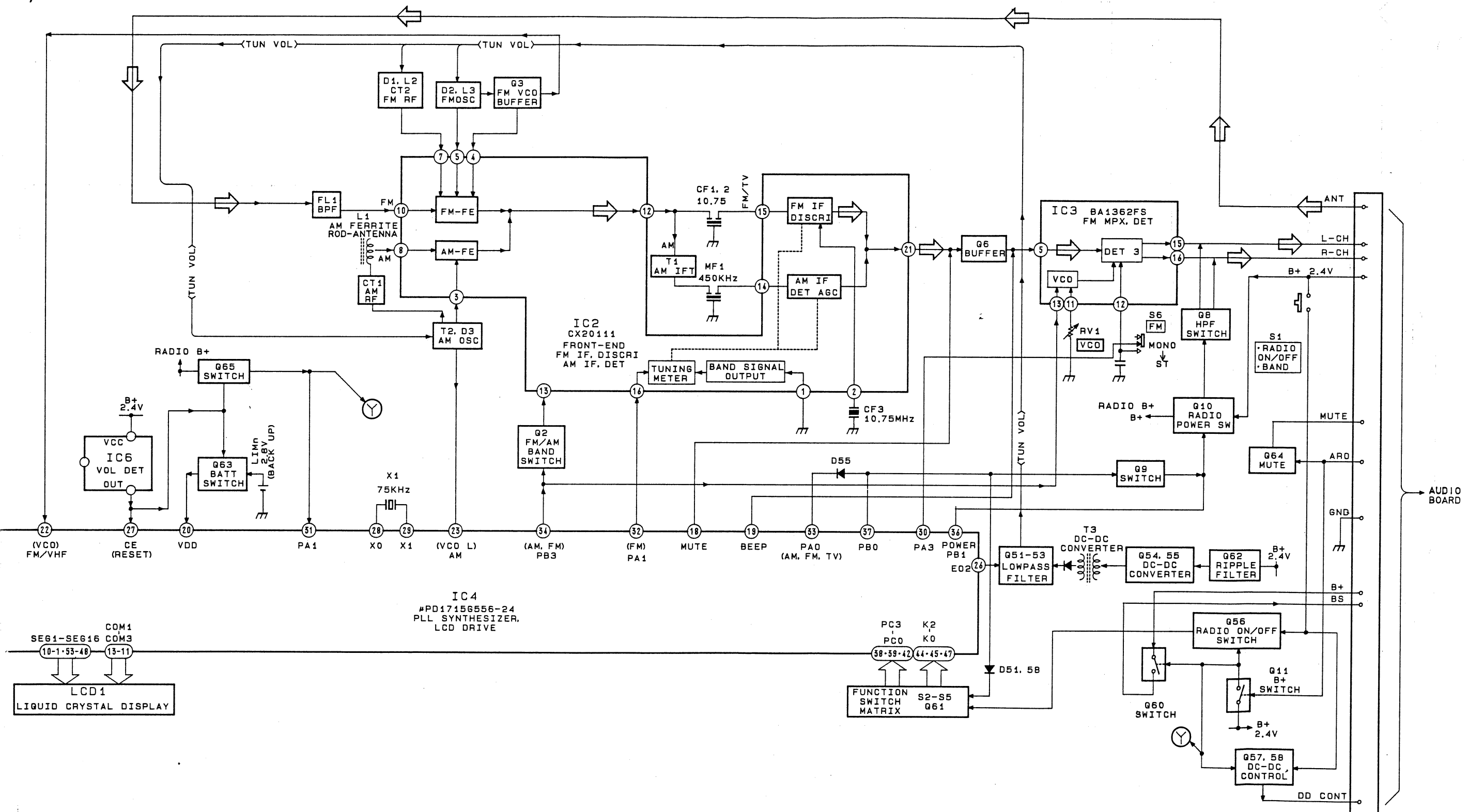


DIAGRAM (TUNER SECTION WM-GX50)

BLOCK DIA

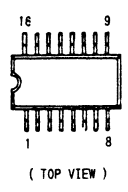


BLOCK DIAGRAM (TUNER SECTION WM-GX51)

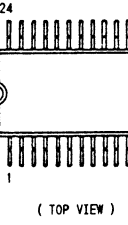


• SEMICONDUCTOR LEAD LAYOUTS

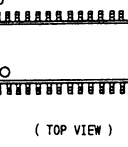
BA1362FS
RC2106M
TA7793FN



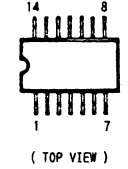
CXA1010N
CX20111
LB1672M



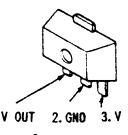
CXA1129N



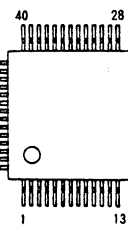
LA4538M



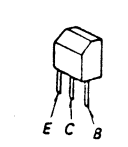
S8051HN-CD-S



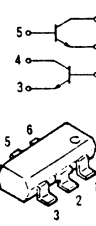
μPD1715G-581-24



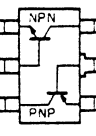
UN5210-Q



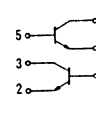
XN4215



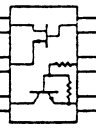
XN4315
XN4608



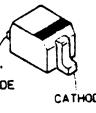
XN5501



XN8081



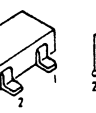
MA110
MA729
1SS355



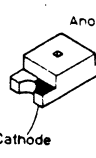
MA728



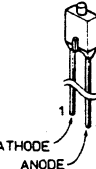
1SS26



GL-2PR90



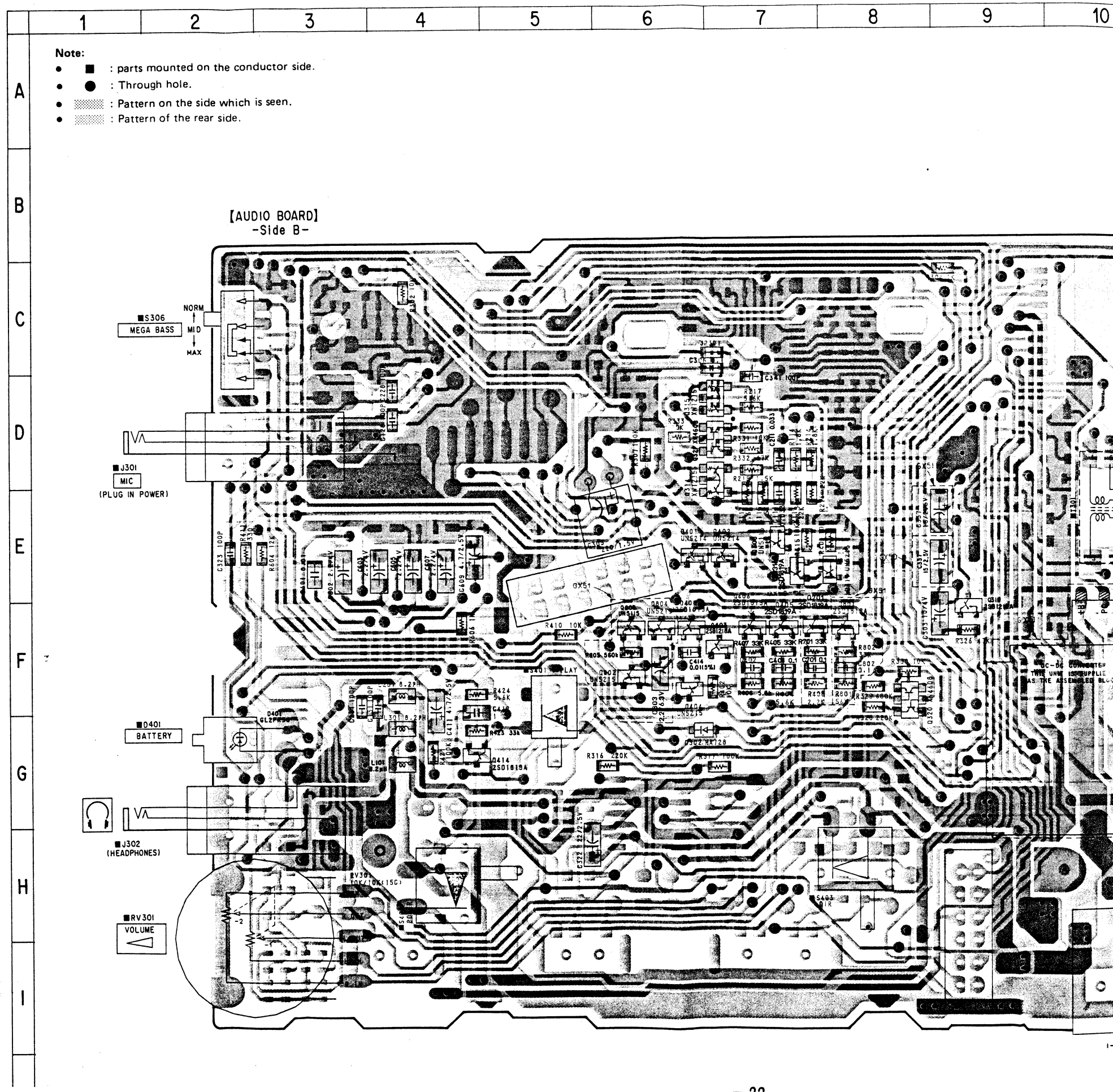
CL-70G-CD

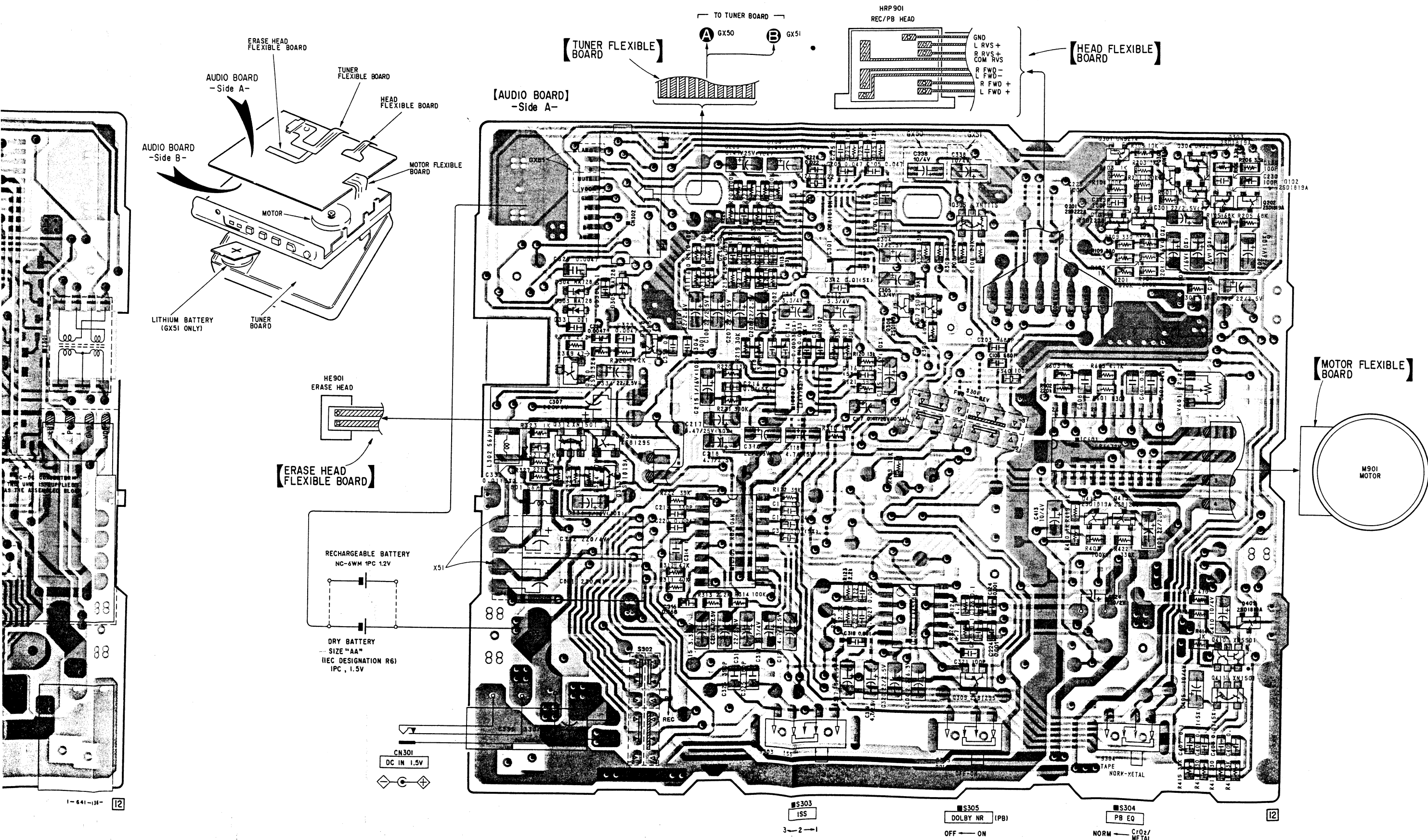


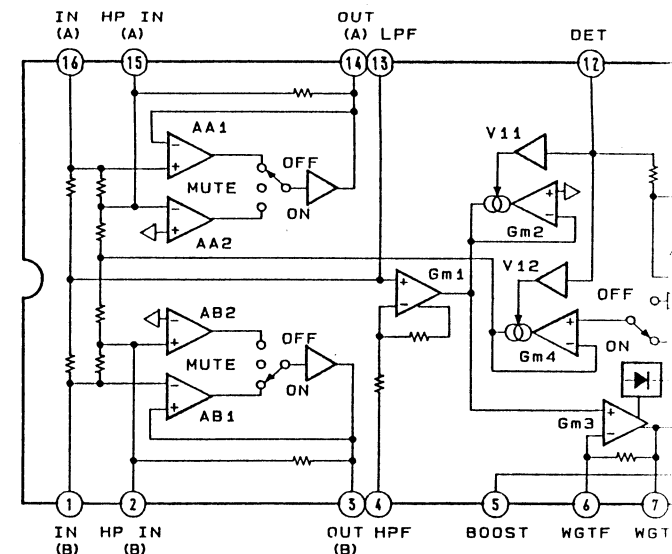
• Semiconductor Location

Ref. No	Location
D302	G-6
D303	D-15
D304	D-15
D305	D-16
D401	G-2
IC301	C-18
IC302	E-18
IC303	G-17
IC304	G-19
IC601	F-21
Q101	C-21
Q102	C-22
Q201	C-21
Q202	C-22
Q301	C-21
Q302	C-21
Q303	C-22
Q304	C-22
Q305	C-19
Q306	D-19
Q307	D-19
Q308	E-7
Q309	H-19
Q310	E-15
Q311	F-16
Q312	F-15
Q313	F-16
Q314	D-7
Q315	D-7
Q316	E-7
Q317	E-8
Q318	E-16
Q319	F-9
Q320	F-8
Q321	D-7
Q401	E-6
Q402	E-7
Q403	F-7
Q404	F-6
Q405	F-7
Q406	F-7
Q408	F-6
Q409	G-22
Q410	H-22
Q411	H-22
Q412	F-21
Q413	F-21
Q414	G-4
Q701 (GX50)	F-7
Q801 (GX51)	F-8
Q802 (GX51)	F-6
Q803 (GX51)	F-6
Q804 (GX51)	F-6

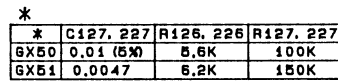
4-2. PRINTED WIRING BOARDS (AUDIO SECTION)



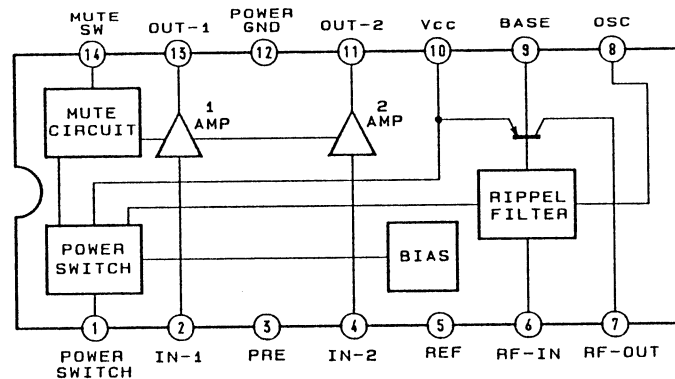
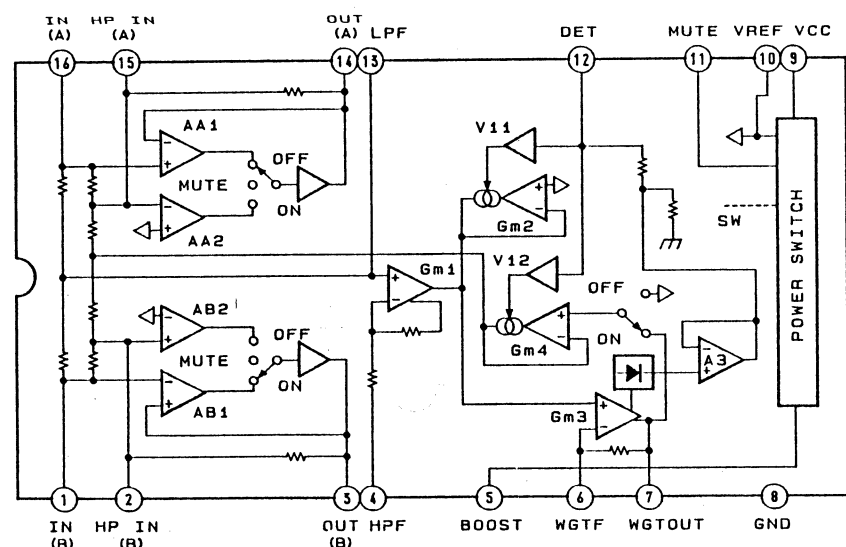




4-3. SCHEMATIC DIAGRAM (AUDIO SECTION)



IC304 LA4538M



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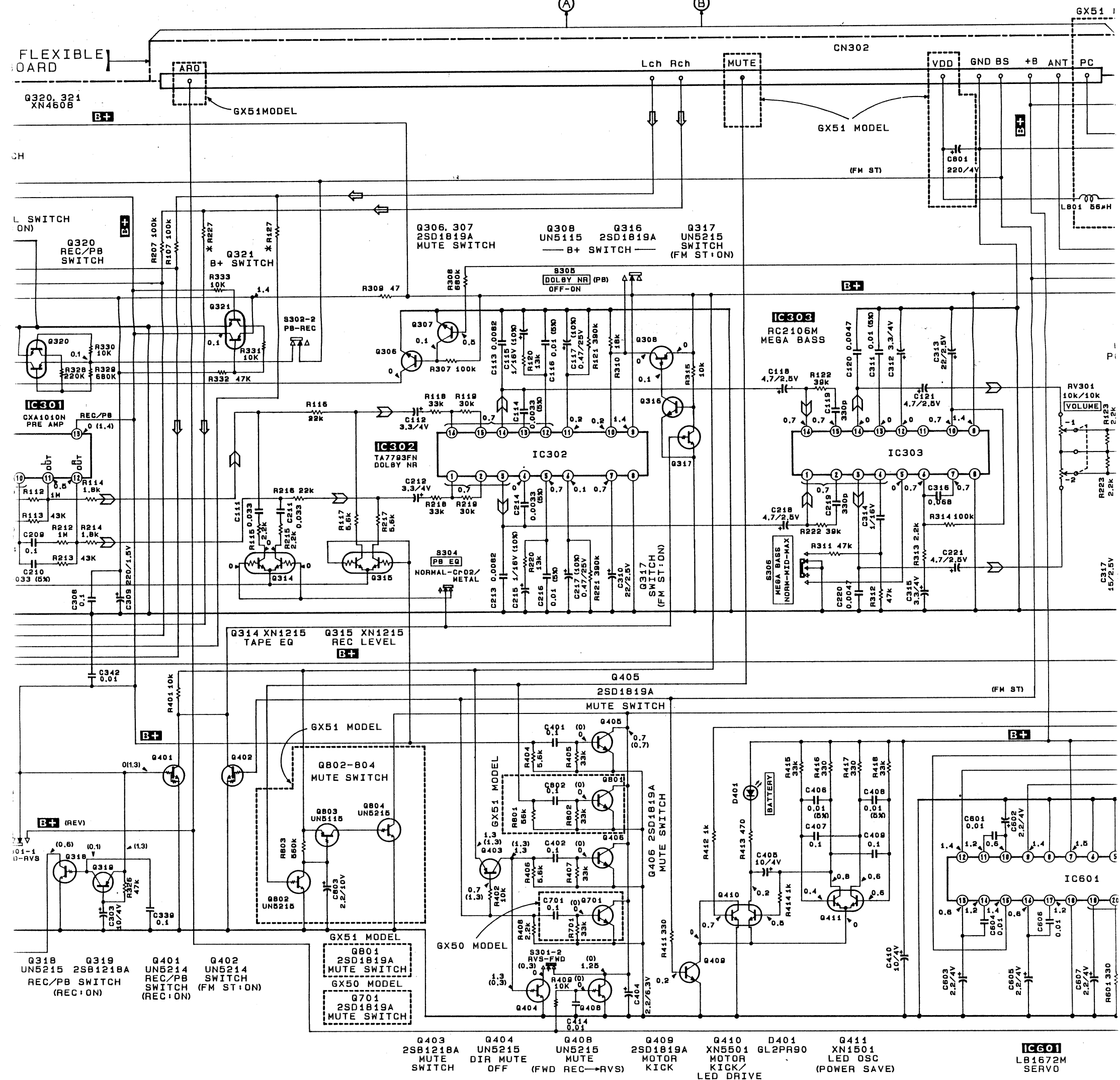
15

1

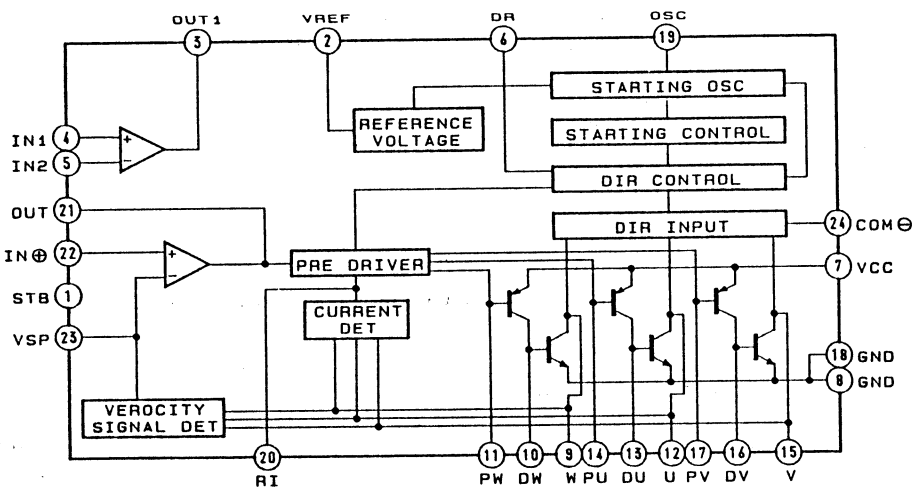
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18

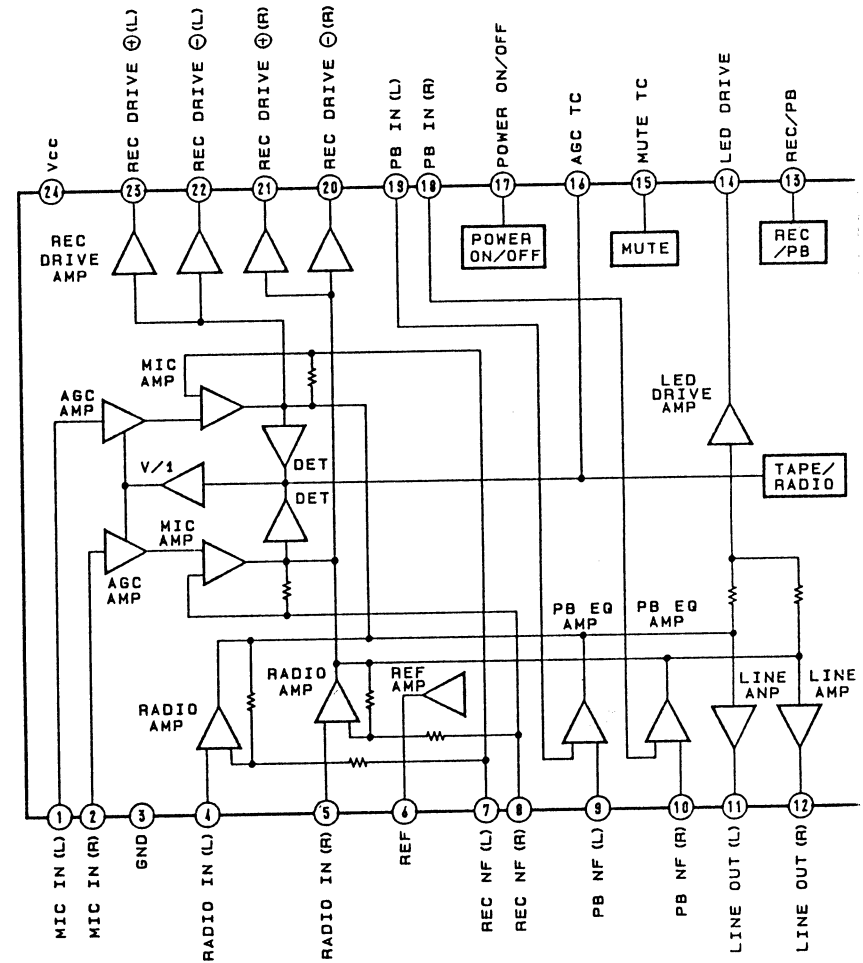
1

GX50 MODEL
TUNER BOARDGX51 MODEL
TUNER BOARD

IC601 LB1672M

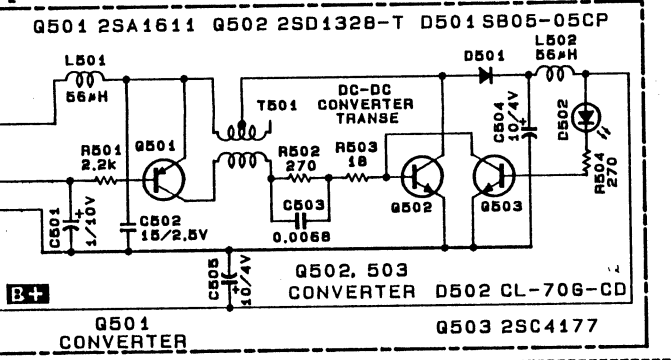


IC301 CXA1010N

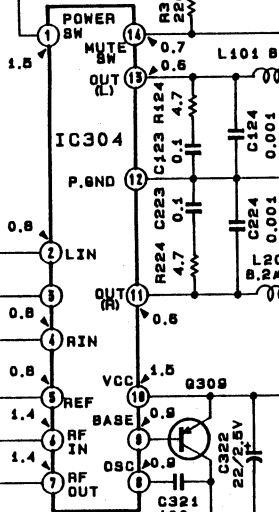


GX51 MODEL

THIS UNIT IS SUPPLIED AS THE ASSEMBLED BLOCK

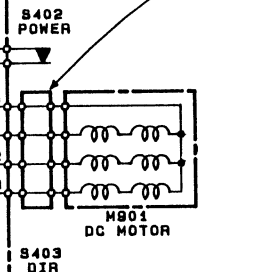


IC304 LA4538M POWER AMP



Q309 2SB1295 RIPPLE FILTER

[MOTOR FLEXIBLE BOARD]



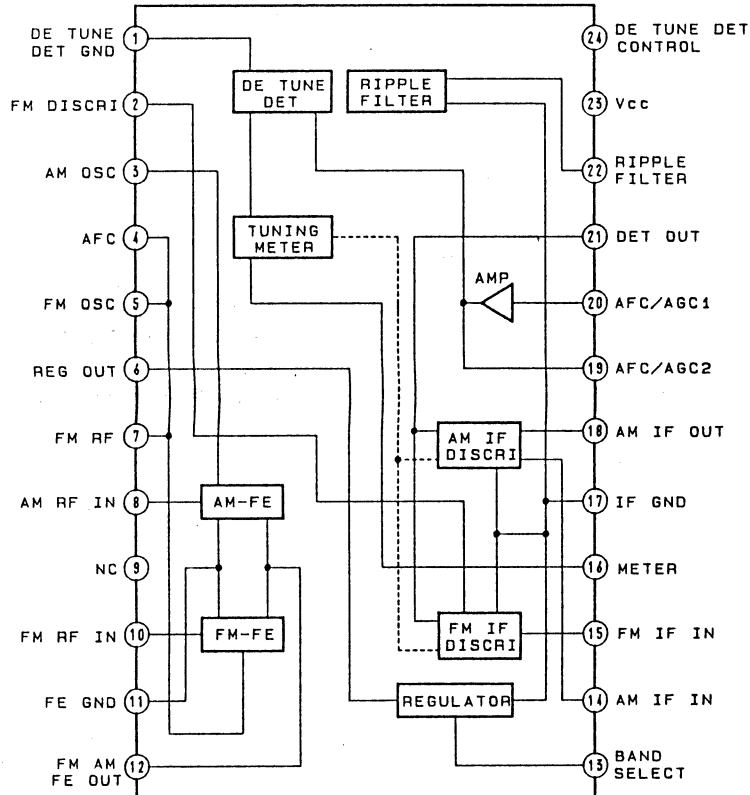
TOTAL CURRENT

TAPE	FWD	120mA
	REV	120mA
	REC	130mA
	FF	145mA
	REC	200mA
RADIO	AM	60mA
	FM	73mA

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Switch with sliding contact indicated by hatched lines shows shorting type.
- B+** : B+ line.
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 1.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FWD
- () : REC
- Volatges are taken with a VOM. (Input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : FM
- : PB
- : REC

IC2 CX20111



- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- **B+** : B+ line.
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 1.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark : FM

- Voltages are taken with a VOM. (Input impedance $10M\Omega$) Voltage variations may be noted due to normal production tolerances.
- Signal path.
 : FM

1 2 3 4 5

A **[TUNER BOARD]** Q2 DTC114TU
FM AM BAND SWIT
IC2 CX20111
FRONT-END FM IF
AM IF DET

B

C

D

E

F

G

H

I

J

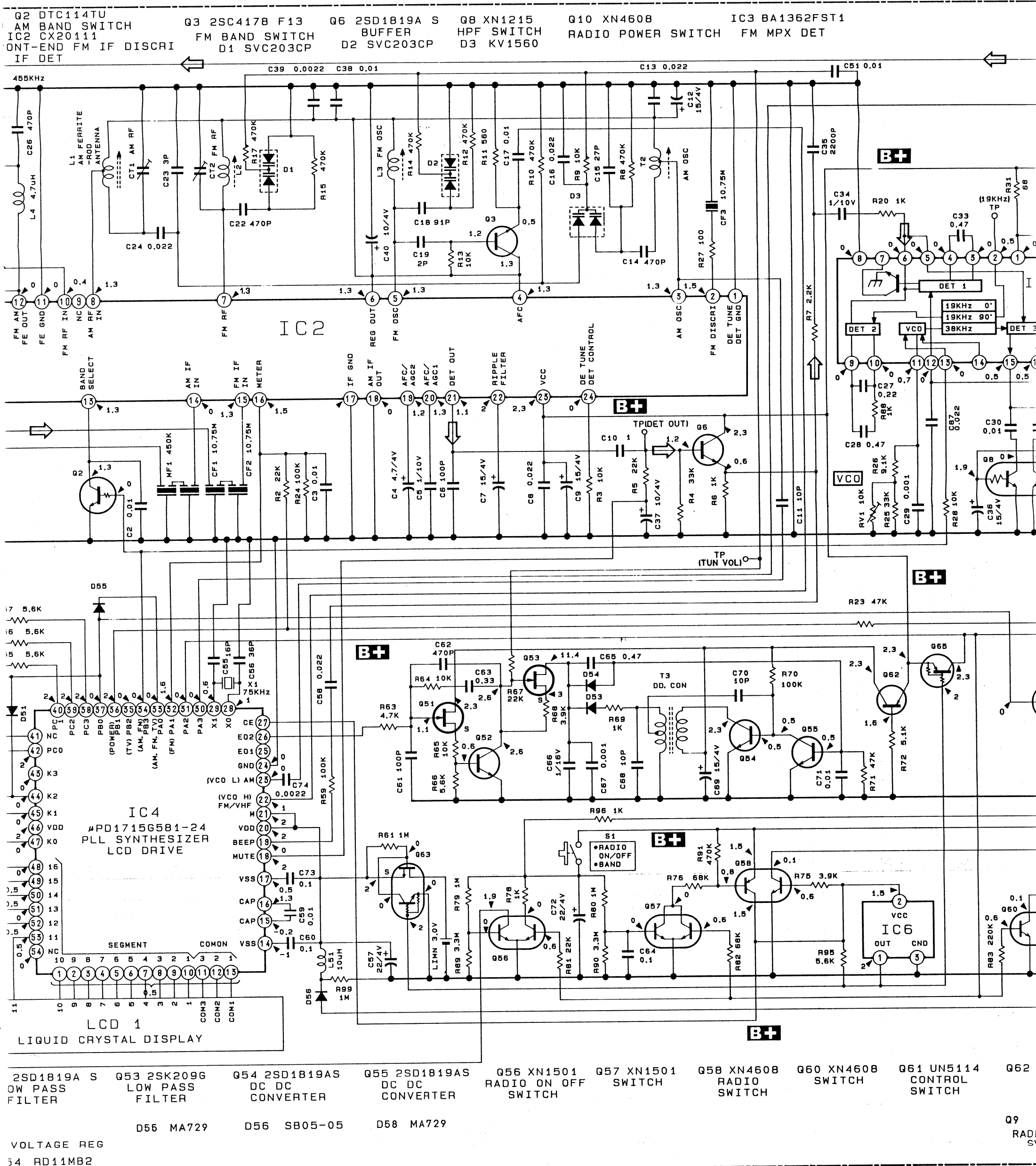
K

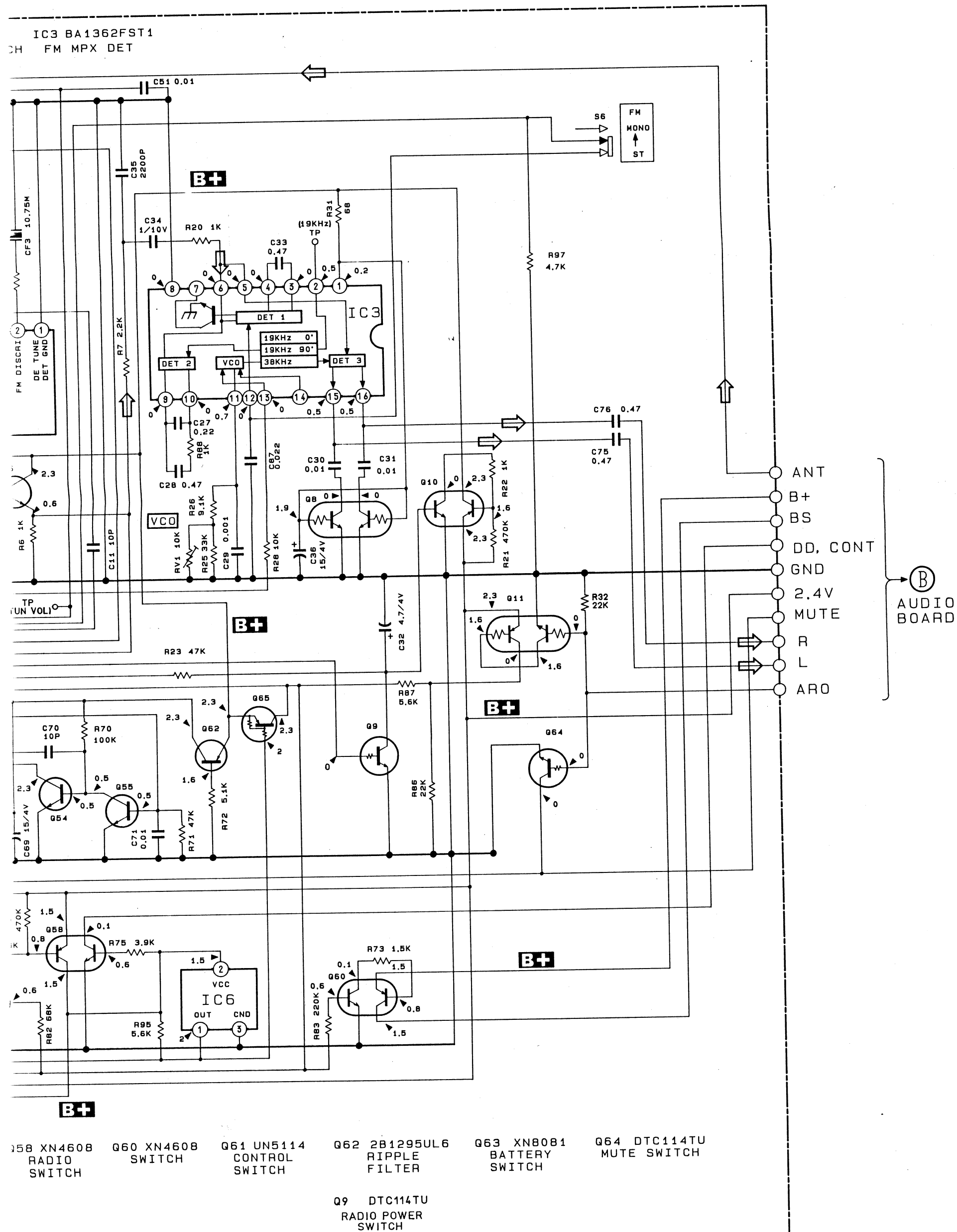
L

M

N

TP

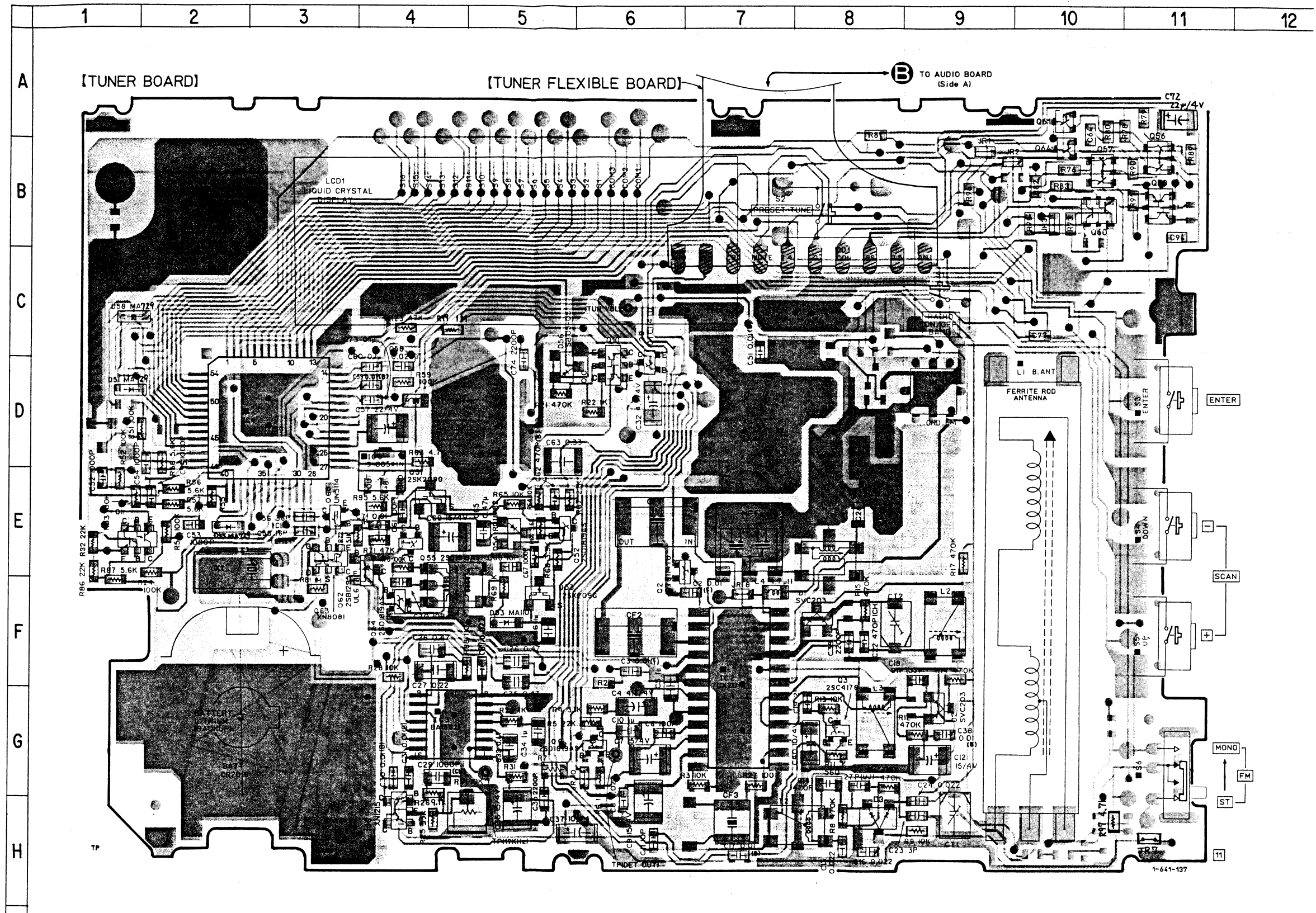




4.5. PRINTED WIRING BOARDS (TUNER SECTION WM-GX51)

Semiconductor Location

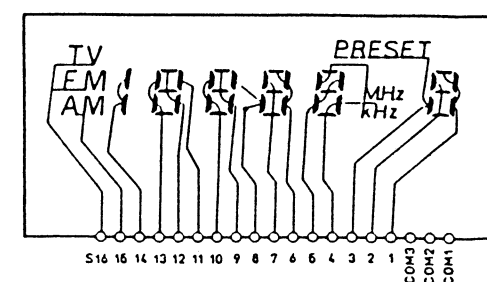
Ref. No	Location
D1	F-8
D2	G-9
D3	H-8
D51	D-1
D53	F-5
D54	E-5
D55	E-2
D56	D-5
D58	C-1
IC2	F-7
IC3	G-4
IC4	D-3
IC6	E-4
Q2	E-6
Q3	G-8
Q6	G-6
Q8	H-4
Q9	D-6
Q10	D-6
Q11	E-1
Q51	E-4
Q52	E-5
Q53	F-5
Q54	F-4
Q55	E-4
Q56	B-11
Q57	B-10
Q60	B-10
Q61	A-10
Q62	E-4
Q63	E-3
Q64	B-10
Q65	E-3



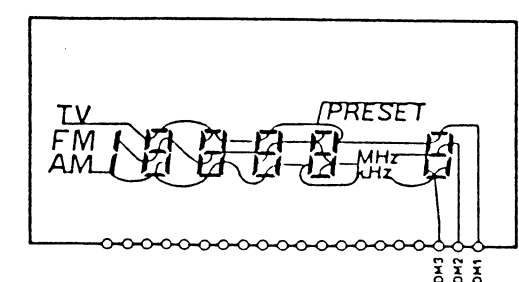
Note:

- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.

LCD1 SEGMENT CONNECTION



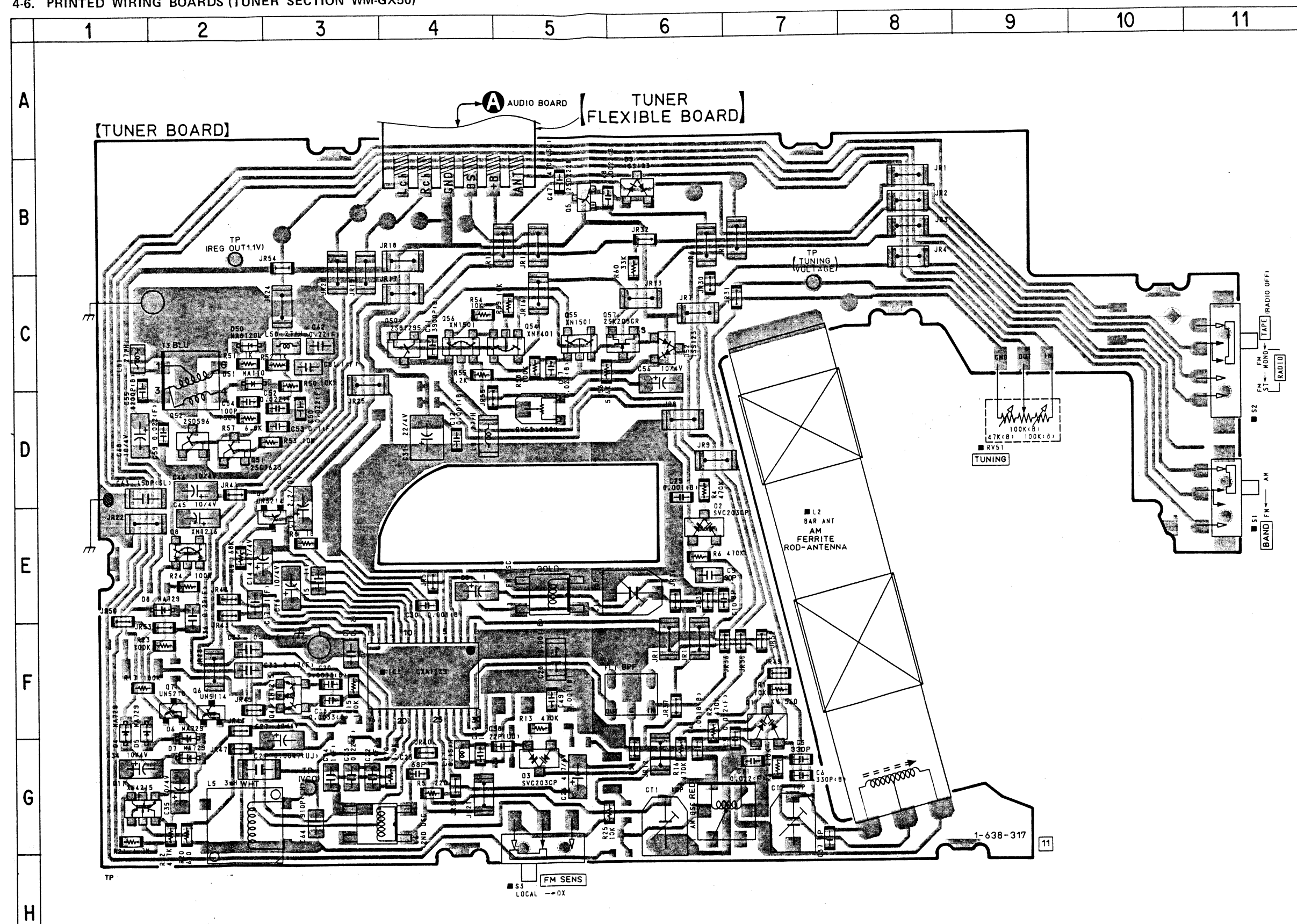
COMMON CONNECTION



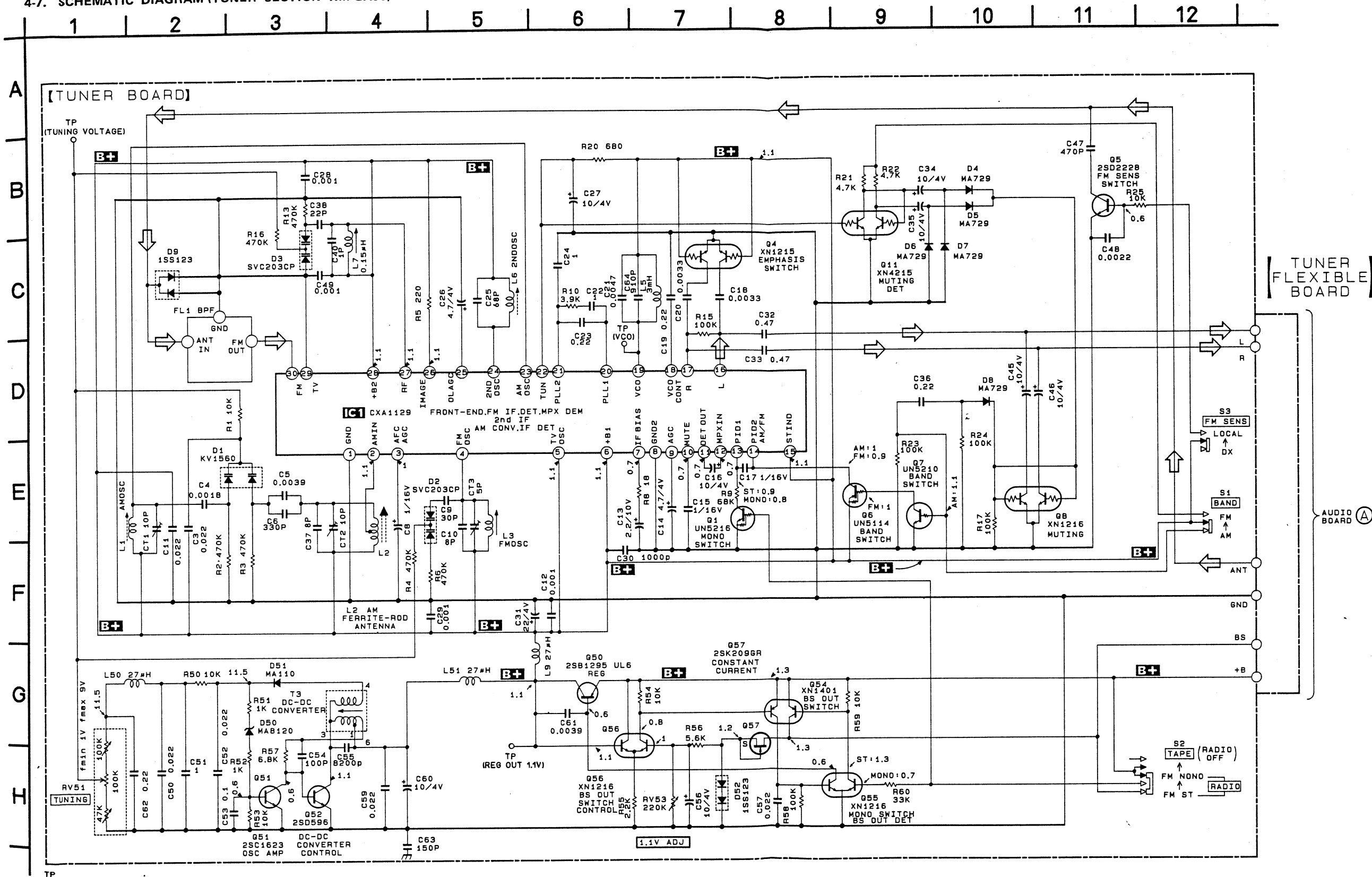
4-6. PRINTED WIRING BOARDS (TUNER SECTION WM-GX50)

• Semiconductor Location

Ref. No	Location
D1	F-7
D2	E-6
D3	G-5
D4	F-1
D5	F-1
D6	F-2
D7	G-2
D8	E-2
D9	B-6
D50	C-2
D51	C-2
D52	C-6
IC1	F-4
Q1	E-3
Q4	F-3
Q5	B-5
Q6	F-2
Q7	F-2
Q8	E-2
Q11	G-1
Q50	C-4
Q51	D-2
Q52	D-2
Q54	C-5
Q55	C-5
Q56	C-4
Q57	C-6



4-7. SCHEMATIC DIAGRAM (TUNER SECTION WM-GX50)



- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - **B+** : B+ line.
 - : adjustment for repair.
 - Total current is measured with no cassette installed.

- Power voltage is dc 1V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM
- Voltages are taken with a VOM. (Input impedance 10M Ω)
Voltage variations may be noted due to normal production tolerances.
- Signal path.
➡ : FM

SECTION 5 EXPLODED VIEWS

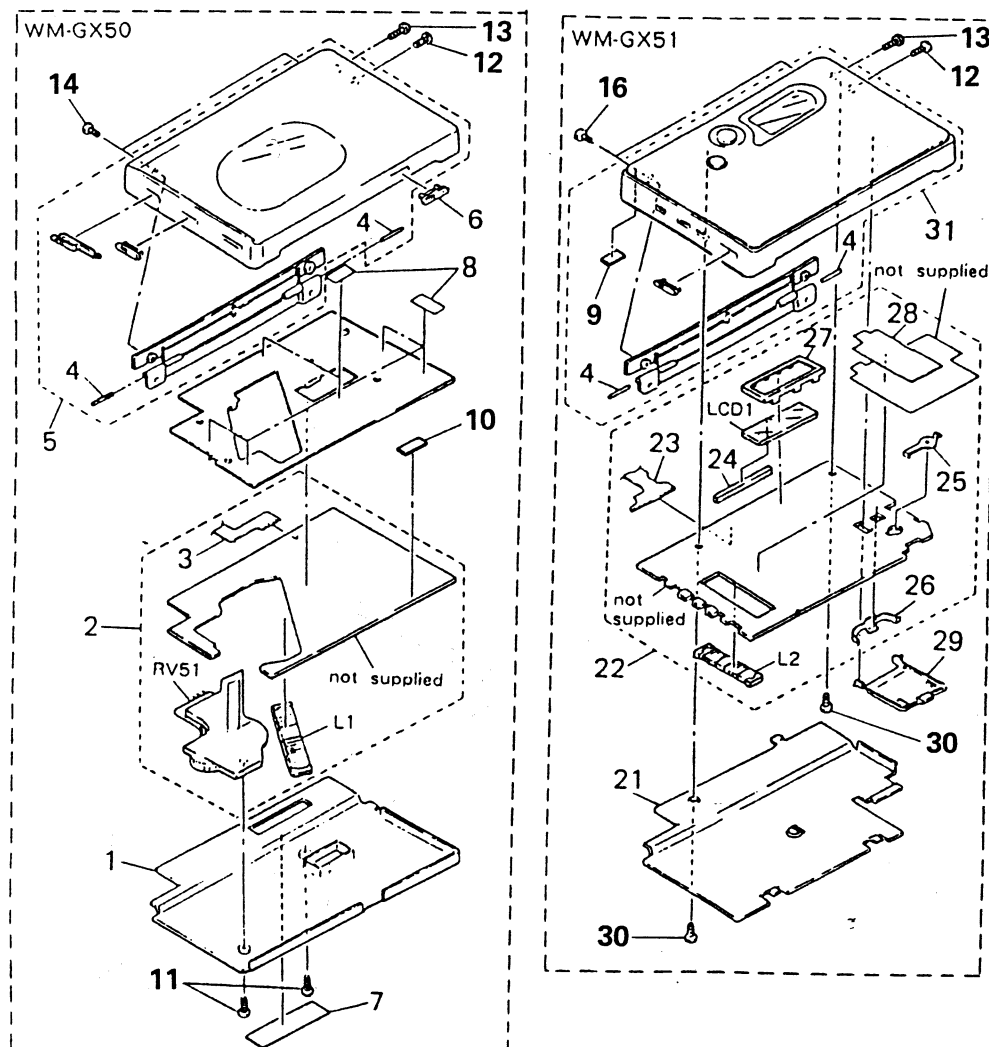
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) ... (RED)

↑
Parts
color

↑
Cabinet's
color
- Items marked " *" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- Abbreviation
IT: Italian model
EA: Saudi Arabia model

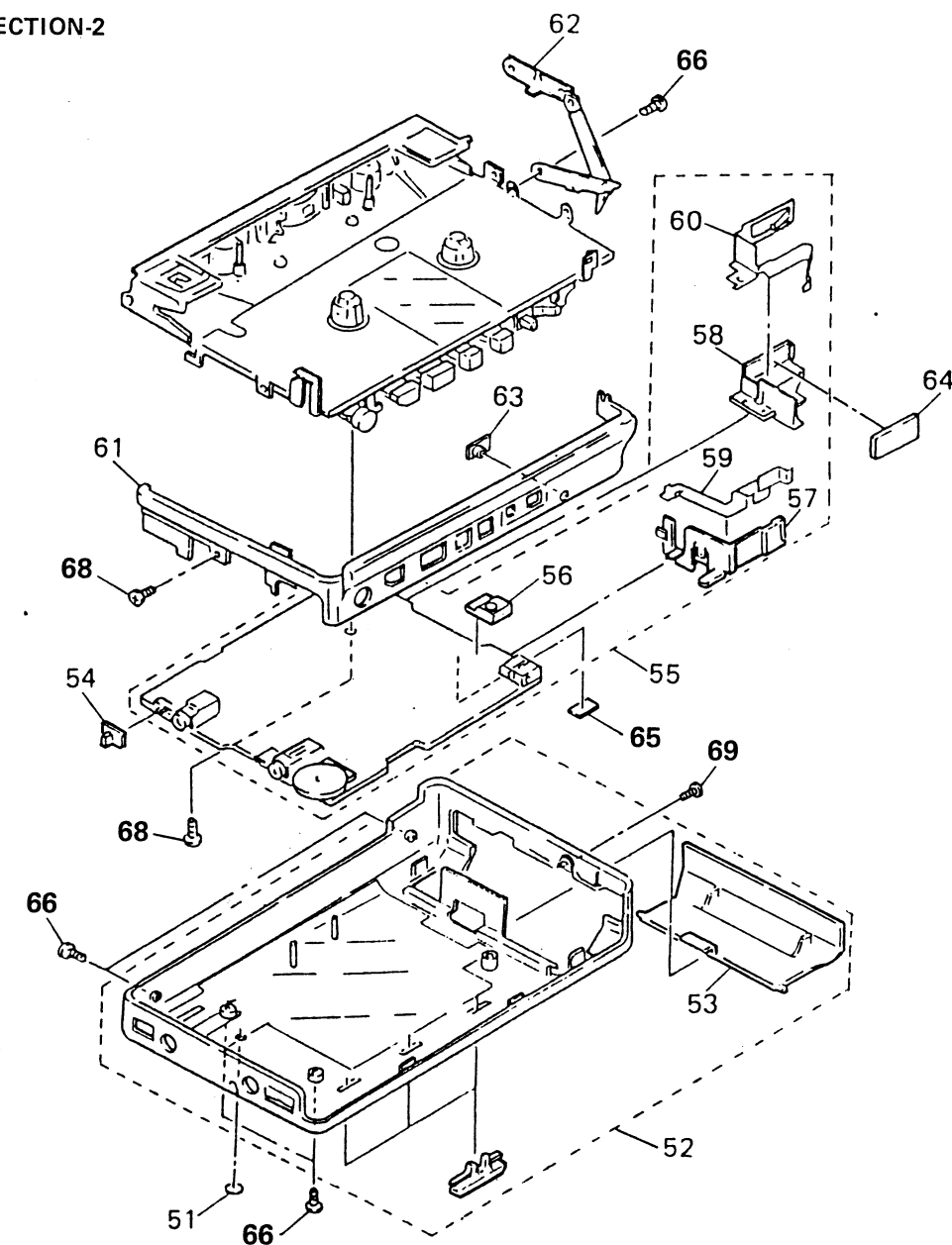
5-1. CABINET SECTION-1



Ref. No.	Part No.	Description	Remark
1	3-373-589-01	COVER (GX50)	
2	A-3016-163-A	TUNER BOARD, COMPLETE (GX50:IT)	
2	A-3016-217-A	TUNER BOARD, COMPLETE (GX50:AEP, EA)	
3	1-641-662-11	TUNER FLEXIBLE, BOARD (GX50)	
4	7-626-308-61	SPRING-PIN 1. 4X14	
5	X-3364-916-1	LID ASSY (B), CASSETTE (GX50:IT)	
5	X-3363-792-1	LID ASSY (B), CASSETTE (GX50:EXCEPT IT)	
6	3-367-791-01	KNOB (LOCAL/DX) (GX50)	
7	3-347-289-01	SHEET (COVER) (GX50)	
8	3-884-241-01	SHEET (C), ADHESIVE (GX50)	
9	9-911-863-XX	SHEET, INSULATING (GX51)	
10	3-375-057-01	COVER (PC BOARD) (GX50)	
11	3-704-197-31	SCREW (M1. 4X3. 0), LOCKING (GX50)	
12	3-704-197-53	SCREW (M1. 4X3. 5), LOCKING (GX50:AEP, EA, GX51)	
13	3-704-197-03	SCREW (M1. 4X1. 6), LOCKING	

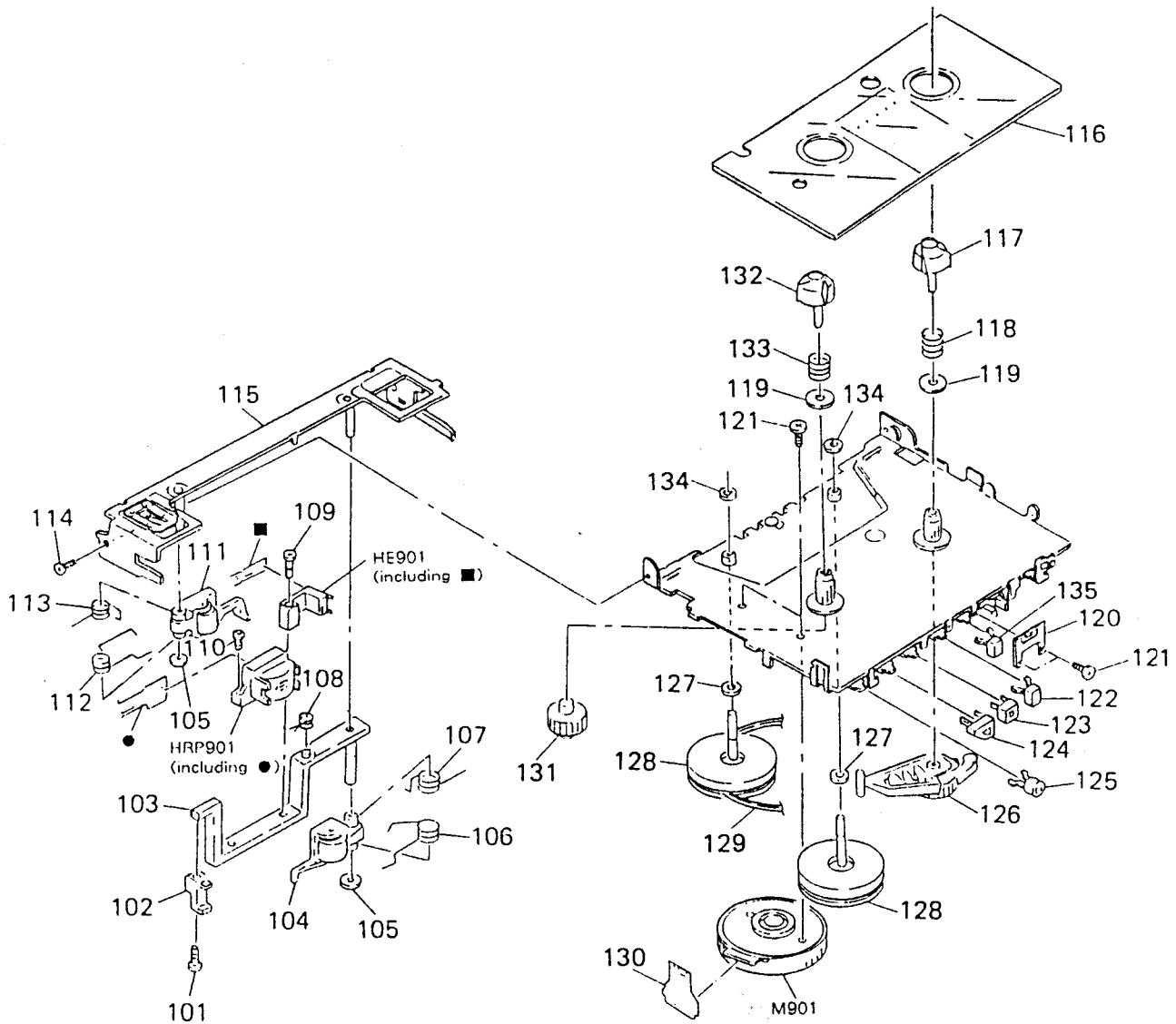
Ref. No.	Part No.	Description	Remark
14	3-704-245-52	SCREW (P1. 4X3. 5) (GX50)	
16	3-704-197-11	SCREW (1. 4X2. 0), LOCKING (GX51)	
21	3-354-439-01	COVER (GX51)	
22	A-3016-129-A	TUNER BOARD, COMPLETE (GX51)	
23	1-641-663-11	PC BOARD, FLEXIBLE (GX51)	
24	1-535-749-11	CONDUCTOR (CONNECTION) (GX51)	
25	3-372-596-01	TERMINAL BOARD (PLUS), BATTERY (GX50)	
26	3-372-595-01	TERMINAL BOARD (MINUS), BATTERY (GX50)	
* 27	3-350-956-01	CASE, SHIELD (GX51)	
* 28	3-354-452-01	PAPER (TUNER) SHIELD (GX51)	
29	3-373-602-01	LID (LITHIUM), BATTERY CASE (GX51)	
30	3-318-382-21	SCREW (1. 7X3), TAPPING (GX51)	
31	X-3363-797-1	LID ASSY (B), CASSETTE (GX51)	
L1	1-402-282-11	ANTENNA, FERRITE-ROD (LW) (GX50)	
L2	1-402-553-11	ANTENNA, FERRITE-ROD (MW) (GX51)	
LCD1	1-808-578-11	DISPLAY PANEL, LIQUID CRYSTAL (GX51)	
RV51	1-241-414-11	TUNING BLOCK (GX50)	

5-2. CABINET SECTION-2



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-342-380-01	SHEET, SPEED HOLE		59	3-373-582-01	TERMINAL, PLUS	
52	X-3363-791-1	CABINET (REAR) ASSY (B) (GX50)		60	3-352-048-01	TERMINAL BOARD, MINUS	
52	X-3363-795-1	CABINET (REAR) ASSY (B) (GX51)		61	3-373-590-01	ORNAMENT, REEL	
53	3-367-803-21	LID, BATTERY CASE (B)		62	X-3352-013-1	ARM ASSY, CLICK	
54	3-348-186-01	KNOB (DBB)		* 63	3-368-117-01	SPACER	
55	A-3016-127-A	AUDIO BOARD, COMPLETE (GX51)		64	9-911-838-XX	CUSHION (B), RUBBER (GX51)	
55	A-3016-130-A	AUDIO BOARD, COMPLETE (GX50)		65	3-831-441-11	CUSHION (B)	
56	A-3016-128-A	DDC BOARD, COMPLETE (GX51)		66	3-704-245-52	SCREW (P1.4X3.5)	
57	3-354-441-01	HOLDER (A), TERMINAL		68	3-704-197-11	SCREW (M1.4X2.0), LOCKING	
58	3-354-442-01	HOLDER (B), TERMINAL		69	3-704-245-12	SCREW (P1.4X2.0)	

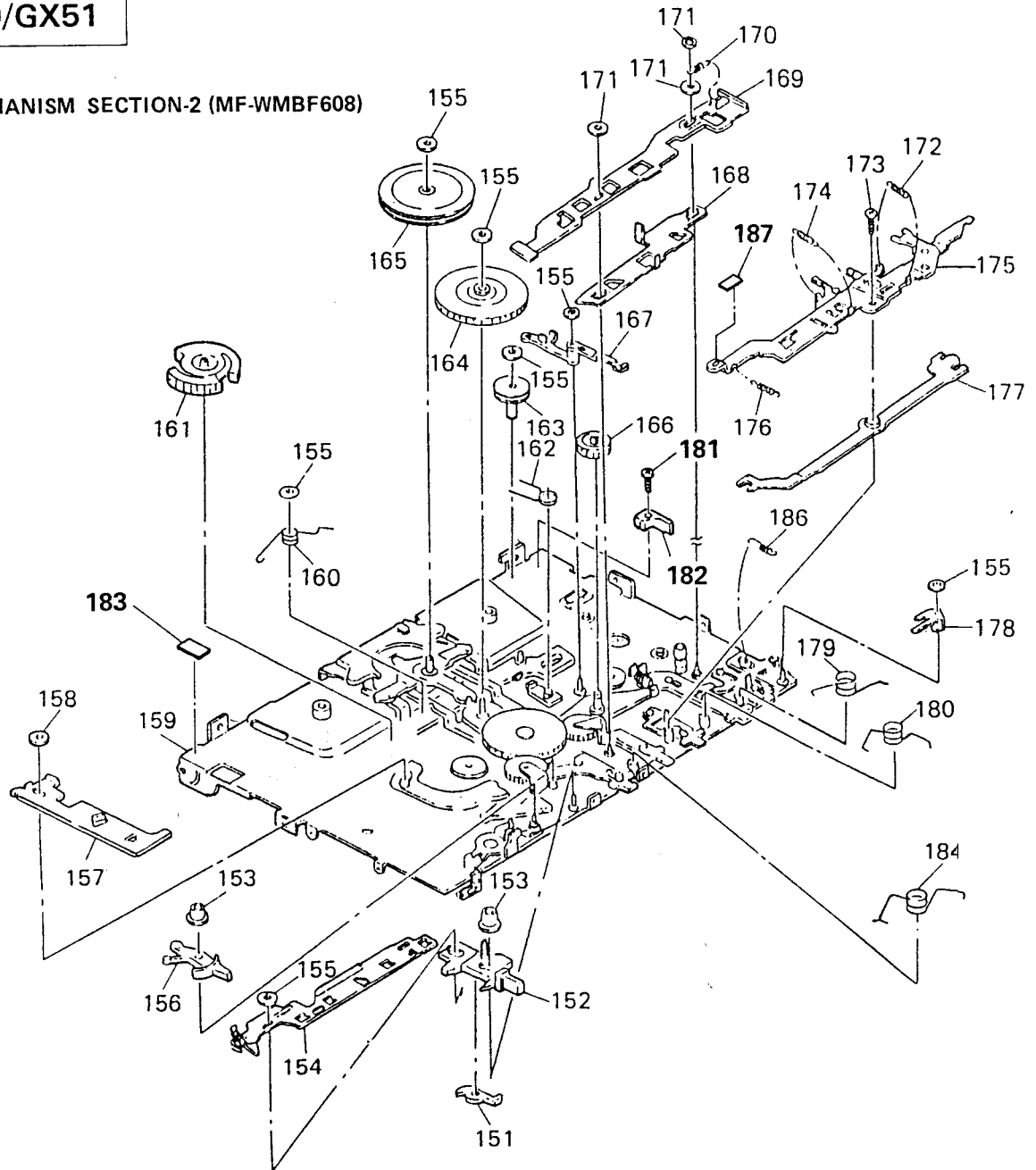
5-3. MECHANISM SECTION-1 (MF-WMBF608)



Ref. No.	Part No.	Description	Remark
101	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
102	3-344-694-01	GUIDE (RIGHT)	
103	3-395-537-01	LEVER (AZ), HEAD	
104	X-3395-509-1	PINCH LEVER (R) ASSY	
105	3-341-473-01	WASHER (MP)	
106	3-348-971-01	SPRING (PINCH N)	
107	3-341-468-01	SPRING (R)	
108	3-347-205-01	SPRING (HD LEVER), TORSION	
109	3-349-890-01	SCREW, TAPPING	
110	3-348-998-71	SCREW (M1.4X4.5), TAPPING	
111	X-3331-036-1	PINCH LEVER (N) ASSY	
112	3-395-536-01	SPRING (PINCH R), TORSION	
113	3-341-469-01	SPRING (N)	
114	3-352-005-01	SCREW (M1.4X1.6), PRECISION STEP	
115	X-3352-010-1	HOLDER (T.X) ASSY	
116	3-354-467-01	COVER, MD	
117	3-348-149-01	REEL, SUPPLY	
118	3-348-107-01	SPRING, COMPRESSION	
119	3-365-356-01	WASHER	

Ref. No.	Part No.	Description	Remark
120	3-395-543-01	SPRING	
121	3-349-825-01	SCREW	
122	3-367-360-01	BUTTON (FF)	
123	3-367-363-01	BUTTON (STOP)	
124	3-367-361-01	BUTTON (FWD)	
125	3-373-581-01	BUTTON (REC)	
126	X-3348-110-1	LEVER ASSY, PICK UP	
127	3-354-407-01	WASHER	
128	X-3352-007-1	WHEEL (X) ASSY, CAPSTAN	
129	3-349-814-01	BELT	
130	1-638-313-11	PC BOARD, MOTOR FLEXIBLE	
131	3-348-151-01	GEAR (TAKE-UP REEL)	
132	3-348-150-01	REEL, TAKE-UP	
133	3-348-989-01	SPRING, COMPRESSION	
134	3-331-007-21	WASHER	
135	3-367-362-01	BUTTON (REW)	
M901	1-541-660-11	MOTOR	
HE901	1-543-657-11	HEAD, MAGNETIC (ERASE)	
HRP901	1-543-658-11	HEAD, MAGNETIC (REC/PB)	

5-4. MECHANISM SECTION-2 (MF-WMBF608)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-348-101-01	RATCHET		170	3-395-505-01	SPRING (REC SLIDER), TENSION	
152	3-395-501-01	LEVER, DIR		171	3-348-953-21	WASHER	
153	3-348-102-01	BUSHING		172	3-395-534-01	SPRING, TENSION	
154	X-3395-502-1	SLIDER ASSY, LOCK		173	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
155	3-348-996-01	WASHER		174	3-395-535-01	SPRING, TENSION	
156	3-348-105-01	LEVER, MODE SELECTION		175	X-3395-503-1	BRACKET ASSY, EJECT	
157	3-352-002-02	LEVER (X), TRIGGER		176	3-395-508-01	SPRING, TENSION	
158	3-348-953-11	WASHER		177	3-395-507-01	LEVER, REC SW	
159	X-3395-501-1	CHASSIS COMPLETE ASSY		178	3-395-542-01	LEVER (B), REC	
160	3-348-172-03	SPRING (S.OFF), TORSION		179	3-395-506-01	SPRING (LOCK SLIDER), TORSION	
161	3-352-032-01	GEAR (X), CAM		180	3-348-103-01	SPRING (PLAY), TORSION	
162	3-348-159-01	SPRING (NR), TORSION		181	3-704-252-41	SCREW (M1.4X6)	
163	3-352-008-01	PULLEY (REVERSE X)		182	3-357-918-01	GUIDE (BELT)	
164	X-3352-027-3	CLUTCH (X) ASSY		183	3-703-929-01	SPACER (P)	
165	3-352-007-01	PULLEY (MIDWAY X)		184	3-395-577-01	SPRING (FR), TORSION	
166	3-352-021-01	GEAR (N.X)		186	3-395-541-01	SPRING, TENSION	
167	3-395-509-01	LEVER, NR		187	3-375-673-01	SPACER (DD) (GX51)	
168	3-395-503-01	SLIDER, SW					
169	3-395-504-01	SLIDER, REC					

AUDIO

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

SEMICONDUCTORS

In each case, u: μ , for example:uA...: μ A..., uPA...: μ PA...,uPB...: μ PB..., uPC...: μ PC...,uPD...: μ PD...

CAPACITORS

uF: μ F

COILS

uH: μ H

When indicating parts by reference number, please include the board name.

• Abbreviation

IT: Italian model

EA: Saudi Arabia model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-3016-127-A	AUDIO BOARD, COMPLETE (GX51)		C127	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V (GX51)
	A-3016-130-A	AUDIO BOARD, COMPLETE (GX50)		C127	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (GX50)

	3-352-048-01	TERMINAL BOARD, MINUS		C128	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
	3-354-441-01	HOLDER (A), TERMINAL		C129	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
	3-354-442-01	HOLDER (B), TERMINAL		C130	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
	3-373-582-01	TERMINAL, PLUS		C131	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
	3-831-441-XX	SPACER (GX51)		C201	1-135-091-00	TANTALUM CHIP	1uF 20% 16V
	9-911-838-XX	CUSHION (B), RUBBER					
	< CAPACITOR >			C202	1-135-091-00	TANTALUM CHIP	1uF 20% 16V
C101	1-135-091-00	TANTALUM CHIP	1uF 20% 16V	C203	1-162-963-11	CERAMIC CHIP	680PF 10% 50V
C102	1-135-091-00	TANTALUM CHIP	1uF 20% 16V	C204	1-164-346-11	CERAMIC CHIP	1uF 16V
C103	1-162-963-11	CERAMIC CHIP	680PF 10% 50V	C205	1-164-361-11	CERAMIC CHIP	0.047uF 16V
C104	1-164-346-11	CERAMIC CHIP	1uF 16V	C206	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V
C105	1-164-361-11	CERAMIC CHIP	0.047uF 16V				
C106	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V	C207	1-135-316-11	TANTAL. CHIP	22uF 20% 2.5V
C107	1-135-316-11	TANTAL. CHIP	22uF 20% 2.5V	C208	1-135-316-11	TANTAL. CHIP	22uF 20% 2.5V
C108	1-135-316-11	TANTAL. CHIP	22uF 20% 2.5V	C209	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C109	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C210	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V
C110	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	C211	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V
C111	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V				
C112	1-135-180-21	TANTALUM CHIP	3.3uF 20% 6.3V	C212	1-135-180-21	TANTALUM CHIP	3.3uF 20% 6.3V
C113	1-164-174-11	CERAMIC CHIP	0.0082uF 10% 25V	C213	1-164-174-11	CERAMIC CHIP	0.0082uF 10% 25V
C114	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	C214	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V
C115	1-135-091-00	TANTALUM CHIP	1uF 20% 16V	C215	1-135-091-00	TANTALUM CHIP	1uF 20% 16V
C116	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C216	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C117	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V				
C118	1-135-218-11	TANTAL. CHIP	4.7uF 20% 2.5V	C217	1-135-145-11	TANTALUM CHIP	0.47uF 10% 35V
C119	1-162-961-11	CERAMIC CHIP	330PF 10% 50V	C218	1-135-218-11	TANTAL. CHIP	4.7uF 20% 2.5V
C120	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C219	1-162-961-11	CERAMIC CHIP	330PF 10% 50V
C121	1-135-218-11	TANTAL. CHIP	4.7uF 20% 2.5V	C220	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
C122	1-162-979-11	CERAMIC CHIP	0.0027uF 10% 50V	C221	1-135-218-11	TANTAL. CHIP	4.7uF 20% 2.5V
C123	1-164-156-11	CERAMIC CHIP	0.1uF 25V				
C124	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C222	1-162-979-11	CERAMIC CHIP	0.0027uF 10% 50V
C125	1-162-956-11	CERAMIC CHIP	180PF 5% 50V	C223	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C126	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C224	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
				C225	1-162-956-11	CERAMIC CHIP	180PF 5% 50V
				C226	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V
				C227	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V (GX51)
				C227	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (GX50)

AUDIO

Ref. No.	Part No.	Description		Remark
C228	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C229	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C230	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C231	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C301	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C302	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C303	1-135-201-11	TANTALUM CHIP	10uF	20% 4V
C304	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C305	1-135-180-21	TANTALUM CHIP	3.3uF	20% 6.3V
C306	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V
C307	1-124-576-11	ELECT	220uF	20% 4V
C308	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C309	1-124-947-11	ELECT	220uF	20% 1.5V
C310	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C311	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C312	1-135-180-21	TANTALUM CHIP	3.3uF	20% 6.3V
C313	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C314	1-164-346-11	CERAMIC CHIP	1uF	16V
C315	1-135-180-21	TANTALUM CHIP	3.3uF	20% 6.3V
C316	1-164-490-11	CERAMIC CHIP	0.068uF	16V
C317	1-135-219-11	TANTAL. CHIP	15uF	20% 2.5V
C318	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V
C319	1-135-218-11	TANTAL. CHIP	4.7uF	20% 2.5V
C320	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C321	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C322	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C323	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C324	1-126-117-11	ELECT	330uF	20% 2V
C325	1-163-123-00	CERAMIC CHIP	180PF	5% 50V
C326	1-163-131-00	CERAMIC CHIP	390PF	5% 50V
C327	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V
C328	1-162-968-11	CERAMIC CHIP	0.0047uF	10% 50V
C329	1-162-968-11	CERAMIC CHIP	0.0047uF	10% 50V
C330	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C331	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C332	1-124-576-11	ELECT	220uF	20% 4V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C334	1-135-091-00	TANTALUM CHIP	1uF	20% 16V
C335	1-126-236-11	ELECT	330uF	20% 2V
C336	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V
C337	1-135-219-11	TANTAL. CHIP	15uF	20% 2.5V
C338	1-135-201-11	TANTALUM CHIP	10uF	20% 4V
C339	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C340	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C341	1-162-953-11	CERAMIC CHIP	100PF	5% 50V
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C401	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C402	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C403	1-135-316-11	TANTAL. CHIP	22uF	20% 2.5V

Ref. No.	Part No.	Description		Remark
C404	1-135-149-21	TANTALUM CHIP	2.2uF	20% 10V
C405	1-135-201-11	TANTALUM CHIP	10uF	20% 4V
C406	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C407	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C408	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C409	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C410	1-135-201-11	TANTALUM CHIP	10uF	20% 4V
C411	1-135-218-11	TANTAL. CHIP	4.7uF	20% 2.5V
C412	1-164-346-11	CERAMIC CHIP	1uF	16V
C413	1-135-201-11	TANTALUM CHIP	10uF	20% 4V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C501	1-164-234-11	CERAMIC CHIP	1uF	10V (GX51)
C502	1-135-219-11	TANTAL. CHIP	15uF	20% 2.5V (GX51)
C503	1-162-969-11	CERAMIC CHIP	0.0068uF	10% 25V (GX51)
C504	1-135-201-11	TANTALUM CHIP	10uF	20% 4V (GX51)
C505	1-135-201-11	TANTALUM CHIP	10uF	20% 4V (GX51)
C601	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C602	1-135-187-21	TANTAL. CHIP	2.2uF	20% 4V
C603	1-135-187-21	TANTAL. CHIP	2.2uF	20% 4V
C604	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C605	1-135-187-21	TANTAL. CHIP	2.2uF	20% 4V
C606	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C607	1-135-187-21	TANTAL. CHIP	2.2uF	20% 4V
C608	1-164-346-11	CERAMIC CHIP	1uF	16V
C609	1-135-218-11	TANTAL. CHIP	4.7uF	20% 2.5V
C701	1-164-156-11	CERAMIC CHIP	0.1uF	25V (GX50)
C801	1-124-576-11	ELECT	220uF	20% 4V (GX51)
C802	1-164-156-11	CERAMIC CHIP	0.1uF	25V (GX51)
C803	1-135-149-21	TANTALUM CHIP	2.2uF	20% 10V (GX51)

< CONNECTOR >

CN301	1-580-919-11	JACK, DC (POLARITY UNIFIED TYPE)
		(DC IN 1.5V)
* CN302	1-691-323-11	HOUSING, CONNECTOR (FPC) 10P

< DIODE >

D302	8-719-421-27	DIODE MA728
D303	8-719-421-27	DIODE MA728
D304	8-719-421-27	DIODE MA728
D305	8-719-421-27	DIODE MA728
D401	8-719-976-16	LED GL2PR90
D501	8-719-938-75	DIODE SB05-05CP (GX51)
D502	8-719-975-06	LED CL-70G-CD (GX51)
D502	8-719-975-08	DIODE CL-70G-CD-TL (LED) (GX51)

AUDIO

Ref. No.	Part No.	Description	Remark
< IC >			
IC301	8-752-036-56	IC CXA1010N	
IC302	8-759-230-88	IC TA7793FN	
IC303	8-759-512-77	IC RC2106M	
IC304	8-759-805-02	IC LA4538M	
IC601	8-759-821-20	IC LB1672M	
< JACK >			
J301	1-573-977-11	JACK (MIC)	
J302	1-573-976-11	JACK (HEADPHONES)	
< METAL CHIP >			
JP301	1-216-864-11	METAL CHIP	0 5% 1/16W
< COIL >			
L101	1-412-005-11	INDUCTOR CHIP	8.2uH
L201	1-412-005-11	INDUCTOR CHIP	8.2uH
L301	1-412-005-11	INDUCTOR CHIP	8.2uH
L302	1-410-213-51	INDUCTOR CHIP	56uH
L501	1-410-213-51	INDUCTOR CHIP	56uH (GX51)
L502	1-410-213-51	INDUCTOR CHIP	56uH (GX51)
L801	1-410-213-51	INDUCTOR CHIP	56uH (GX51)
< TRANSISTOR >			
Q101	8-729-144-15	TRANSISTOR	2SD2228-D43
Q102	8-729-402-32	TRANSISTOR	2SD1819A-R
Q201	8-729-144-15	TRANSISTOR	2SD2228-D43
Q202	8-729-402-32	TRANSISTOR	2SD1819A-R
Q301	8-729-402-93	TRANSISTOR	UN5214
Q302	8-729-420-53	TRANSISTOR	UN5115
Q303	8-729-402-32	TRANSISTOR	2SD1819A-R
Q304	8-729-420-50	TRANSISTOR	UN5215
Q305	8-729-403-45	TRANSISTOR	XN1115
Q306	8-729-402-32	TRANSISTOR	2SD1819A-R
Q307	8-729-402-32	TRANSISTOR	2SD1819A-R
Q308	8-729-420-53	TRANSISTOR	UN5115
Q309	8-729-807-87	TRANSISTOR	2SB1295-UL6
Q310	8-729-400-56	TRANSISTOR	2SD1328-T
Q311	8-729-807-87	TRANSISTOR	2SB1295-UL6
Q311	8-729-807-92	TRANSISTOR	2SB1295-UL7-TA
Q312	8-729-402-13	TRANSISTOR	XN1501
Q313	8-729-402-32	TRANSISTOR	2SD1819A-R
Q314	8-729-403-17	TRANSISTOR	XN1215
Q315	8-729-403-17	TRANSISTOR	XN1215
Q316	8-729-402-32	TRANSISTOR	2SD1819A-R
Q317	8-729-420-50	TRANSISTOR	UN5215
Q318	8-729-420-50	TRANSISTOR	UN5215
Q319	8-729-402-55	TRANSISTOR	2SB1218A-R

Ref. No.	Part No.	Description	Remark
Q320	8-729-402-16	TRANSISTOR	XN4608
Q321	8-729-402-16	TRANSISTOR	XN4608
Q401	8-729-402-93	TRANSISTOR	UN5214
Q402	8-729-402-93	TRANSISTOR	UN5214
Q403	8-729-402-55	TRANSISTOR	2SB1218A-R
Q404	8-729-420-50	TRANSISTOR	UN5215
Q405	8-729-402-32	TRANSISTOR	2SD1819A-R
Q406	8-729-402-32	TRANSISTOR	2SD1819A-R
Q408	8-729-402-32	TRANSISTOR	2SD1819A-R
Q409	8-729-402-32	TRANSISTOR	2SD1819A-R
Q410	8-729-402-75	TRANSISTOR	XN5501
Q411	8-729-402-13	TRANSISTOR	XN1501
Q412	8-729-402-32	TRANSISTOR	2SD1819A-R
Q413	8-729-402-55	TRANSISTOR	2SB1218A-R
Q414	8-729-402-32	TRANSISTOR	2SD1819A-R
Q501	78-729-117-16	TRANSISTOR	2SA1611-M6 (GX51)
Q501	78-729-602-36	TRANSISTOR	2SA1602 (GX51)
Q502	8-729-400-56	TRANSISTOR	2SD1328-T (GX51)
Q503	8-729-602-21	TRANSISTOR	2SC4154-F (GX51)
Q701	8-729-402-32	TRANSISTOR	2SD1819A-R (GX50)
Q801	8-729-402-32	TRANSISTOR	2SD1819A-R (GX51)
Q802	8-729-420-50	TRANSISTOR	UN5215 (GX51)
Q803	8-729-420-53	TRANSISTOR	UN5115 (GX51)
Q804	8-729-420-50	TRANSISTOR	UN5215 (GX51)
< RESISTOR >			
R101	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R102	1-216-821-11	METAL CHIP	1K 5% 1/16W
R103	1-216-821-11	METAL CHIP	1K 5% 1/16W
R104	1-216-845-11	METAL CHIP	100K 5% 1/16W
R105	1-216-843-11	METAL CHIP	68K 5% 1/16W
R106	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R107	1-216-845-11	METAL CHIP	100K 5% 1/16W
R108	1-216-838-11	METAL CHIP	27K 5% 1/16W
R109	1-216-815-11	METAL CHIP	330 5% 1/16W
R110	1-216-819-11	METAL CHIP	680 5% 1/16W
R111	1-216-819-11	METAL CHIP	680 5% 1/16W
R112	1-216-857-11	METAL CHIP	1M 5% 1/16W
R113	1-218-295-11	METAL GLAZE	43K 5% 1/16W
R114	1-216-824-11	METAL CHIP	1.8K 5% 1/16W
R115	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
R116	1-216-837-11	METAL CHIP	22K 5% 1/16W
R117	1-216-830-11	METAL CHIP	5.6K 5% 1/16W
R118	1-216-839-11	METAL CHIP	33K 5% 1/16W
R119	1-218-294-11	METAL GLAZE	30K 5% 1/16W
R120	1-216-994-11	METAL GLAZE	13K 5% 1/16W
R121	1-216-852-11	METAL CHIP	390K 5% 1/16W

AUDIO

Ref. No.	Part No.	Description			Remark
R122	1-216-840-11	METAL CHIP	39K	5%	1/16W
R123	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R124	1-216-793-11	METAL GLAZE	4.7	5%	1/16W
R125	1-216-834-11	METAL CHIP	12K	5%	1/16W
R126	1-216-830-11	METAL CHIP	5.6K	5%	1/16W(GX50)
R126	1-218-290-11	METAL GLAZE	6.2K	5%	1/16W(GX51)
R127	1-216-845-11	METAL CHIP	100K	5%	1/16W(GX50)
R127	1-216-847-11	METAL CHIP	150K	5%	1/16W(GX51)
R201	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R202	1-216-821-11	METAL CHIP	1K	5%	1/16W
R203	1-216-821-11	METAL CHIP	1K	5%	1/16W
R204	1-216-845-11	METAL CHIP	100K	5%	1/16W
R205	1-216-843-11	METAL CHIP	68K	5%	1/16W
R206	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W
R208	1-216-838-11	METAL CHIP	27K	5%	1/16W
R209	1-216-815-11	METAL CHIP	330	5%	1/16W
R210	1-216-819-11	METAL CHIP	680	5%	1/16W
R211	1-216-819-11	METAL CHIP	680	5%	1/16W
R212	1-216-857-11	METAL CHIP	1M	5%	1/16W
R213	1-218-295-11	METAL GLAZE	43K	5%	1/16W
R214	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R215	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R216	1-216-837-11	METAL CHIP	22K	5%	1/16W
R217	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R218	1-216-839-11	METAL CHIP	33K	5%	1/16W
R219	1-218-294-11	METAL GLAZE	30K	5%	1/16W
R220	1-216-994-11	METAL GLAZE	13K	5%	1/16W
R221	1-216-852-11	METAL CHIP	390K	5%	1/16W
R222	1-216-840-11	METAL CHIP	39K	5%	1/16W
R223	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R224	1-216-793-11	METAL GLAZE	4.7	5%	1/16W
R225	1-216-834-11	METAL CHIP	12K	5%	1/16W
R226	1-216-830-11	METAL CHIP	5.6K	5%	1/16W(GX50)
R226	1-218-290-11	METAL GLAZE	6.2K	5%	1/16W(GX51)
R227	1-216-845-11	METAL CHIP	100K	5%	1/16W(GX50)
R227	1-216-847-11	METAL CHIP	150K	5%	1/16W(GX51)
R301	1-216-821-11	METAL CHIP	1K	5%	1/16W
R302	1-216-833-11	METAL CHIP	10K	5%	1/16W
R303	1-216-817-11	METAL CHIP	470	5%	1/16W
R304	1-216-821-11	METAL CHIP	1K	5%	1/16W
R305	1-216-833-11	METAL CHIP	10K	5%	1/16W
R306	1-216-851-11	METAL CHIP	330K	5%	1/16W
R307	1-216-845-11	METAL CHIP	100K	5%	1/16W
R308	1-216-855-11	METAL CHIP	680K	5%	1/16W
R309	1-216-805-11	METAL CHIP	47	5%	1/16W
R310	1-216-836-11	METAL CHIP	18K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R311	1-216-841-11	METAL CHIP	47K	5%	1/16W
R312	1-216-841-11	METAL CHIP	47K	5%	1/16W
R313	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R314	1-216-845-11	METAL CHIP	100K	5%	1/16W
R315	1-216-833-11	METAL CHIP	10K	5%	1/16W
R316	1-216-849-11	METAL CHIP	220K	5%	1/16W
R317	1-216-845-11	METAL CHIP	100K	5%	1/16W
R318	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R319	1-216-805-11	METAL CHIP	47	5%	1/16W
R320	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R321	1-216-838-11	METAL CHIP	27K	5%	1/16W
R322	1-216-840-11	METAL CHIP	39K	5%	1/16W
R323	1-216-821-11	METAL CHIP	1K	5%	1/16W
R324	1-216-841-11	METAL CHIP	47K	5%	1/16W
R325	1-216-817-11	METAL CHIP	470	5%	1/16W
R326	1-216-841-11	METAL CHIP	47K	5%	1/16W
R327	1-216-849-11	METAL CHIP	220K	5%	1/16W
R328	1-216-849-11	METAL CHIP	220K	5%	1/16W
R329	1-216-855-11	METAL CHIP	680K	5%	1/16W
R330	1-216-833-11	METAL CHIP	10K	5%	1/16W
R331	1-216-833-11	METAL CHIP	10K	5%	1/16W
R332	1-216-841-11	METAL CHIP	47K	5%	1/16W
R333	1-216-833-11	METAL CHIP	10K	5%	1/16W
R401	1-216-833-11	METAL CHIP	10K	5%	1/16W
R402	1-216-833-11	METAL CHIP	10K	5%	1/16W
R403	1-216-845-11	METAL CHIP	100K	5%	1/16W
R404	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R405	1-216-839-11	METAL CHIP	33K	5%	1/16W
R406	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R407	1-216-839-11	METAL CHIP	33K	5%	1/16W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R409	1-216-833-11	METAL CHIP	10K	5%	1/16W
R410	1-216-833-11	METAL CHIP	10K	5%	1/16W
R411	1-216-815-11	METAL CHIP	330	5%	1/16W
R412	1-216-821-11	METAL CHIP	1K	5%	1/16W
R413	1-216-817-11	METAL CHIP	470	5%	1/16W
R414	1-216-821-11	METAL CHIP	1K	5%	1/16W
R415	1-216-839-11	METAL CHIP	33K	5%	1/16W
R416	1-216-815-11	METAL CHIP	330	5%	1/16W
R417	1-216-815-11	METAL CHIP	330	5%	1/16W
R418	1-216-839-11	METAL CHIP	33K	5%	1/16W
R419	1-216-821-11	METAL CHIP	1K	5%	1/16W
R420	1-216-821-11	METAL CHIP	1K	5%	1/16W
R421	1-216-845-11	METAL CHIP	100K	5%	1/16W
R422	1-216-851-11	METAL CHIP	330K	5%	1/16W
R423	1-216-839-11	METAL CHIP	33K	5%	1/16W

AUDIO

TUNER

Ref. No.	Part No.	Description	Remark
R424	1-216-830-11	METAL CHIP	5.6K 5% 1/16W
R501	1-216-825-11	METAL CHIP	2.2K 5% 1/16W(GX51)
R502	1-216-814-11	METAL CHIP	270 5% 1/16W(GX51)
R503	1-216-800-11	METAL GLAZE	18 5% 1/16W(GX51)
R504	1-216-825-11	METAL CHIP	2.2K 5% 1/16W(GX51)
R601	1-216-815-11	METAL CHIP	330 5% 1/16W
R602	1-216-849-11	METAL CHIP	220K 5% 1/16W
R603	1-216-833-11	METAL CHIP	10K 5% 1/16W
R604	1-216-834-11	METAL CHIP	12K 5% 1/16W
R605	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R606	1-216-821-11	METAL CHIP	1K 5% 1/16W
R701	1-216-839-11	METAL CHIP	33K 5% 1/16W(GX50)
R801	1-216-842-11	METAL CHIP	56K 5% 1/16W(GX51)
R802	1-216-839-11	METAL CHIP	33K 5% 1/16W(GX51)
R803	1-216-854-11	METAL CHIP	560K 5% 1/16W(GX51)

< VARIABLE RESISTOR >

RV301	1-241-658-11	RES. VAR. CARBON 10K/10K (VOLUME)
RV601	1-238-711-11	RES. ADJ. METAL GLAZE 2.2K (SPEED)

< SWITCH >

S301	1-572-214-11	SWITCH. SLIDE (FWD/REV)
S302	1-572-214-11	SWITCH. SLIDE (REC/PB)
S303	1-571-506-41	SWITCH. SLIDE (ISS)
S304	1-571-275-31	SWITCH. SLIDE (PB EQ)
S305	1-571-275-31	SWITCH. SLIDE (DOLBY NR)
S306	1-571-506-41	SWITCH. SLIDE (MEGA BASE)
S401	1-572-467-11	SWITCH. PUSH (1 KEY) (PLAY)
S402	1-572-933-11	SWITCH. PUSH (POWER)
S403	1-572-933-11	SWITCH. PUSH (DIR)

< TRANSFORMER >

T301	1-466-282-11	OSCILLATION TRANS. BIAS
T501	1-449-543-11	TRANSFORMER, DC-DC CONVERTER (GX51)

A-3016-163-A TUNER BOARD, COMPLETE (WM-GX50:IT)
A-3016-217-A TUNER BOARD, COMPLETE (WM-GX50 ONLY)
(AEP, EA)

1-641-662-11 FLEXIBLE BOARD
3-375-057-01 COVER (PC BOARD)

< CAPACITOR >

C3	1-162-995-11	CERAMIC CHIP	0.022uF	50V
C4	1-162-977-11	CERAMIC CHIP	0.0018uF	10% 50V
C5	1-164-173-11	CERAMIC CHIP	0.0039uF	10% 50V
C6	1-162-961-11	CERAMIC CHIP	330PF	10% 50V
C8	1-135-091-00	TANTALUM CHIP	1uF	20% 16V

Ref. No.	Part No.	Description	Remark
C9	1-163-104-00	CERAMIC CHIP	30PF 5% 50V
C10	1-162-939-11	CERAMIC CHIP	8PF 0.5PF 50V
C11	1-162-995-11	CERAMIC CHIP	0.022uF 50V
C12	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C13	1-135-149-21	TANTALUM CHIP	2.2uF 20% 10V
C14	1-135-151-21	TANTALUM CHIP	4.7uF 20% 4V
C15	1-164-346-11	CERAMIC CHIP	1uF 16V
C16	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C17	1-164-346-11	CERAMIC CHIP	1uF 16V
C18	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V
C19	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C20	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V
C21	1-162-625-11	CERAMIC CHIP	0.0047uF 5% 50V
C22	1-164-346-11	CERAMIC CHIP	1uF 16V
C23	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C24	1-164-346-11	CERAMIC CHIP	1uF 16V
C25	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C26	1-135-151-21	TANTALUM CHIP	4.7uF 20% 4V
C27	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C28	1-163-205-00	CERAMIC CHIP	0.001uF 5% 50V
C29	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C30	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C31	1-135-202-21	TANTAL. CHIP	22uF 20% 4V
C32	1-164-005-11	CERAMIC CHIP	0.47uF 25V
C33	1-164-005-11	CERAMIC CHIP	0.47uF 25V
C34	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C35	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C36	1-164-222-11	CERAMIC CHIP	0.22uF 25V
C37	1-162-939-11	CERAMIC CHIP	8PF 0.5PF 50V
C38	1-162-998-11	CERAMIC CHIP	22PF 5% 50V
C40	1-164-428-11	CERAMIC CHIP	1PF 0.25PF 50V
C45	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C46	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C47	1-164-362-11	CERAMIC CHIP	470PF 5% 50V
C48	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V
C49	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C50	1-162-995-11	CERAMIC CHIP	0.022uF 50V
C51	1-164-346-11	CERAMIC CHIP	1uF 16V
C52	1-162-995-11	CERAMIC CHIP	0.022uF 50V
C53	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C54	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C55	1-164-174-11	CERAMIC CHIP	0.0082uF 10% 25V
C56	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C57	1-162-995-11	CERAMIC CHIP	0.022uF 50V
C59	1-162-995-11	CERAMIC CHIP	0.022uF 50V

TUNER

Ref. No.	Part No.	Description	Remark
C60	1-135-201-11	TANTALUM CHIP 10uF 20% 4V	
C61	1-164-173-11	CERAMIC CHIP 0.0039uF 10% 50V	
C62	1-164-222-11	CERAMIC CHIP 0.22uF 25V	
C63	1-163-185-00	CERAMIC CHIP 150PF 5% 50V	
C64	1-163-140-00	CERAMIC CHIP 910PF 5% 50V	

< TRIMMER >

CT1	1-141-327-11	CAP. VAR. TRIMMER (CHIP TYPE) (AM FREQ COVER)	
CT2	1-141-327-11	CAP. VAR. TRIMMER (CHIP TYPE) (AM TRACKING)	
CT3	1-141-325-11	CAP. VAR. TRIMMER (CHIP TYPE) (FM FREQ COVER)	

< DIODE >

D1	8-719-951-05	DIODE KV1560	
D2	8-719-939-02	DIODE SVC203CP	
D3	8-719-939-02	DIODE SVC203CP	
D4	8-719-420-51	DIODE MA729	
D5	8-719-420-51	DIODE MA729	
D6	8-719-420-51	DIODE MA729	
D7	8-719-420-51	DIODE MA729	
D8	8-719-420-51	DIODE MA729	
D9	8-719-800-76	DIODE 1SS226	
D50	8-719-421-21	DIODE MA8120-L	
D51	8-719-404-46	DIODE MA110	
D52	8-719-800-76	DIODE 1SS226	

< FILTER >

FL1	1-239-015-21	FILTER, BAND PASS	
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< IC >

IC1	8-752-050-43	IC CXA1129N	
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< JUMPER >

JR1	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR2	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR3	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR4	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR5	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR6	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR7	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR8	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR9	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR10	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR11	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR12	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR13	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR14	1-216-296-00	METAL CHIP 0 5% 1/8W	

Ref. No.	Part No.	Description	Remark
JR15	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR16	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR17	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR18	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR19	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR20	1-216-296-00	METAL CHIP 0 5% 1/8W	

JR21	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR22	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR23	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR24	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR25	1-216-296-00	METAL CHIP 0 5% 1/8W	

JR30	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR31	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR32	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR33	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR34	1-216-864-11	METAL CHIP 0 5% 1/16W	

JR35	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR36	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR37	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR38	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR39	1-216-864-11	METAL CHIP 0 5% 1/16W	

JR40	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR41	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR42	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR43	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR44	1-216-864-11	METAL CHIP 0 5% 1/16W	

JR45	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR46	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR47	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR48	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR49	1-216-864-11	METAL CHIP 0 5% 1/16W	

JR50	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR51	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR52	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR53	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR54	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR55	1-216-864-11	METAL CHIP 0 5% 1/16W	

< COIL >

L1	1-412-764-21	COIL	
L2	1-402-551-11	ANTENNA, FERRITE-ROD (LW)	
L3	1-424-531-11	COIL	
L5	1-412-763-21	COIL	
L6	1-460-163-11	COIL (WITH CORE)	
L7	1-410-983-31	INDUCTOR CHIP 0.15uH	
L9	1-410-209-51	INDUCTOR CHIP 27uH	
L50	1-412-011-31	INDUCTOR CHIP 27uH	
L51	1-412-011-31	INDUCTOR CHIP 27uH	

TUNER

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q1	8-729-402-93	TRANSISTOR UN5214	
Q4	8-729-403-17	TRANSISTOR XN1215	
Q5	8-729-144-15	TRANSISTOR 2SD2228-D43	
Q6	8-729-402-96	TRANSISTOR UN5114	
Q7	8-729-421-74	TRANSISTOR UN5210-Q	
Q8	8-729-421-23	TRANSISTOR XN1216	
Q11	8-729-422-54	TRANSISTOR XN4215	
Q50	8-729-807-87	TRANSISTOR 2SB1295-UL6	
Q51	8-729-100-66	TRANSISTOR 2SC1623-L6	
Q52	8-729-141-75	TRANSISTOR 2SD596DV345	
Q54	8-729-403-42	TRANSISTOR XN1401	
Q55	8-729-402-13	TRANSISTOR XN1501	
Q56	8-729-402-13	TRANSISTOR XN1501	
Q57	8-729-220-93	TRANSISTOR 2SK209-G	
< RESISTOR >			
R1	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R2	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R3	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R4	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R5	1-216-813-11	METAL CHIP 220 5% 1/16W	
R6	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R8	1-216-800-11	METAL GLAZE 18 5% 1/16W	
R9	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R10	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R13	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R15	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R16	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R17	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R20	1-216-819-11	METAL CHIP 680 5% 1/16W	
R21	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R22	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R23	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R24	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R25	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R50	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R51	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R52	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R53	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R54	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R55	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R56	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R57	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R58	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R59	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R60	1-216-839-11	METAL CHIP 33K 5% 1/16W	

Ref. No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV51	1-241-414-11	TUNING BLOCK (TUNING)	
RV53	1-238-094-11	RES, ADJ CERMET 220K (1.1V ADJ)	
< SWITCH >			
S1	1-571-275-31	SWITCH, SLIDE (BAND)	
S2	1-571-506-41	SWITCH, SLIDE (TAPE/RADIO)	
S3	1-571-120-11	SWITCH, SLIDE (FM SENS)	
< TRANSFORMER >			
T3	1-448-302-11	TRANSFORMER, DC-DC CONVERTER	

A-3016-129-A TUNER BOARD, COMPLETE (WM-GX51 ONLY)			

1-535-749-11 CONDUCTOR (CONNECTION)			
3-703-929-01 SPACER (C)			
*	3-350-956-01	CASE, SHIELD	
*	3-373-595-01	TERMINAL BOARD (PLUS), BATTERY	
*	3-373-596-01	TERMINAL BOARD (MINUS), BATTERY	
3-375-679-01 SHEET (PC BOARD)			
< CAPACITOR >			
C2	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C3	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C4	1-135-151-21	TANTALUM CHIP 4.7uF 20% 4V	
C5	1-164-234-11	CERAMIC CHIP 1uF 10V	
C6	1-162-953-11	CERAMIC CHIP 100PF 5% 50V	
C7	1-135-158-21	TANTALUM CHIP 15uF 20% 4V	
C8	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C9	1-135-158-21	TANTALUM CHIP 15uF 20% 4V	
C10	1-164-234-11	CERAMIC CHIP 1uF 10V	
C11	1-162-941-11	CERAMIC CHIP 10PF 0.5PF 50V	
C12	1-135-158-21	TANTALUM CHIP 15uF 20% 4V	
C13	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C14	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C15	1-162-920-11	CERAMIC CHIP 27PF 5% 50V	
C16	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C17	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C18	1-162-999-11	CERAMIC CHIP 91PF 5% 50V	
C19	1-162-932-11	CERAMIC CHIP 2PF 0.25PF 50V	
C22	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C23	1-162-934-11	CERAMIC CHIP 3PF 0.25PF 50V	
C24	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C26	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C27	1-164-330-21	CERAMIC CHIP 0.22uF 10% 16V	
C28	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
C29	1-163-275-11	CERAMIC CHIP 0.001uF 5% 50V	

TUNER

Ref. No.	Part No.	Description	Remark
C30	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C31	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C32	1-135-151-21	TANTALUM CHIP 4.7uF	20% 4V
C33	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C34	1-164-234-11	CERAMIC CHIP 1uF	10V
C35	1-162-966-11	CERAMIC CHIP 0.0022uF	10% 50V
C36	1-135-158-21	TANTALUM CHIP 15uF	20% 4V
C37	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C38	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C39	1-162-966-11	CERAMIC CHIP 0.0022uF	10% 50V
C40	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C51	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C52	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C53	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C54	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C55	1-164-237-11	CERAMIC CHIP 16PF	5% 50V
C56	1-164-238-11	CERAMIC CHIP 36PF	5% 50V
C57	1-135-202-21	TANTAL. CHIP 22uF	20% 4V
C58	1-162-995-11	CERAMIC CHIP 0.022uF	50V
C59	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C60	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C61	1-162-953-11	CERAMIC CHIP 100PF	5% 50V
C62	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C63	1-164-006-11	CERAMIC CHIP 0.33uF	10% 16V
C64	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C65	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C66	1-164-234-11	CERAMIC CHIP 1uF	10V
C67	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C68	1-162-941-11	CERAMIC CHIP 10PF	0.5PF 50V
C69	1-135-158-21	TANTALUM CHIP 15uF	20% 4V
C70	1-162-941-11	CERAMIC CHIP 10PF	0.5PF 50V
C71	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C72	1-135-202-21	TANTAL. CHIP 22uF	20% 4V
C73	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C74	1-162-966-11	CERAMIC CHIP 0.0022uF	10% 50V
C75	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C76	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C77	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C87	1-162-995-11	CERAMIC CHIP 0.022uF	50V
C94	1-164-238-11	CERAMIC CHIP 36PF	5% 50V
C95	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
< FILTER >			
CF1	1-579-528-11	FILTER, CERAMIC (10.75MHz)	
CF2	1-579-528-11	FILTER, CERAMIC (10.75MHz)	
CF3	1-567-920-21	FILTER, CERAMIC (10.75MHz)	

Ref. No.	Part No.	Description	Remark
< TRIMMER >			
CT1	1-141-327-11	CAP. VAR. TRIMMER (CHIP TYPE) (AM TRACKING)	
CT2	1-141-327-11	CAP. VAR. TRIMMER (CHIP TYPE) (FM FREQ COVER)	
< DIODE >			
D1	8-719-939-02	DIODE SVC203CP	
D2	8-719-939-02	DIODE SVC203CP	
D3	8-719-951-05	DIODE KV1560	
D51	8-719-420-51	DIODE MA729	
D53	8-719-404-46	DIODE MA110	
D54	8-719-106-62	DIODE RD11M-B2	
D55	8-719-420-51	DIODE MA729	
D56	8-719-938-75	DIODE SB05-05CP	
D58	8-719-420-51	DIODE MA729	
< FILTER >			
FL1	1-236-504-11	FILTER, BAND PASS	
< IC >			
IC2	8-752-050-00	IC CX20111	
IC3	8-759-945-89	IC BA1362FS	
IC4	8-759-146-01	IC uPD1715G-581-24	
IC6	8-759-947-95	IC S-8051HN-CD-S	
< JUMPER >			
JR1	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR2	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR3	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR7	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR8	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR10	1-216-864-11	METAL CHIP 0 5% 1/16W	
< COIL >			
L1	1-402-282-11	ANTENNA, FERRITE-ROD (MW)	
L2	1-459-590-11	COIL (WITH CORE) (FM RF)	
L3	1-459-590-11	COIL (WITH CORE) (FM OSC)	
L4	1-412-002-31	INDUCTOR CHIP 4.7uH	
L51	1-412-006-31	INDUCTOR CHIP 10uH	
< LIQUID CRYSTAL DISPLAY >			
LCD1	1-808-578-11	DISPLAY PANEL, LIQUID CRYSTAL	
< FILTER >			
MF1	1-577-261-21	FILTER, CERAMIC (450KHz)	

TUNER

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q2	8-729-905-XX	TRANSISTOR DTC114TU	
Q3	8-729-117-72	TRANSISTOR 2SC4178-F13	
Q6	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q8	8-729-403-17	TRANSISTOR XN1215	
Q9	8-729-905-XX	TRANSISTOR DTC114TU	
Q10	8-729-402-16	TRANSISTOR XN4608	
Q11	8-729-422-18	TRANSISTOR XN4315	
Q51	8-729-220-93	TRANSISTOR 2SK209-G	
Q52	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q53	8-729-220-93	TRANSISTOR 2SK209-G	
Q54	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q55	8-729-230-63	TRANSISTOR 2SC4116-YG	
Q56	8-729-402-13	TRANSISTOR XN1501	
Q57	8-729-402-13	TRANSISTOR XN1501	
Q58	8-729-402-16	TRANSISTOR XN4608	
Q60	8-729-402-16	TRANSISTOR XN4608	
Q61	8-729-402-96	TRANSISTOR UN5114	
Q62	8-729-807-87	TRANSISTOR 2SB1295-UL6	
Q63	8-729-422-13	TRANSISTOR XN8081	
Q64	8-729-905-XX	TRANSISTOR DTC114TU	
Q65	8-729-402-96	TRANSISTOR UN5114	
< RESISTOR >			
R2	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R3	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R4	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R5	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R6	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R7	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R8	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R9	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R10	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R11	1-216-818-11	METAL CHIP 560 5% 1/16W	
R12	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R13	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R14	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R15	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R17	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R20	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R21	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R22	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R23	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R24	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R25	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R26	1-218-345-11	METAL GLAZE 9.1K 5% 1/16W	
R27	1-216-809-11	METAL CHIP 100 5% 1/16W	
R28	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R31	1-216-807-11	METAL CHIP 68 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R32	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R51	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R52	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R53	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R54	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R55	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R57	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R58	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R59	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R61	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R63	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R64	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R65	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R66	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R67	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R68	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R69	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R70	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R71	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R72	1-218-272-11	METAL GLAZE 5.1K 5% 1/16W	
R73	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R75	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R76	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R78	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R79	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R80	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R81	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R82	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R83	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R86	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R87	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R88	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R89	1-216-863-11	METAL GLAZE 3.3M 5% 1/16W	
R90	1-216-863-11	METAL GLAZE 3.3M 5% 1/16W	
R91	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R95	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R96	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R97	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R99	1-216-857-11	METAL CHIP 1M 5% 1/16W	
< VARIABLE RESISTOR >			
RV1	1-237-927-11	RES, ADJ, CERMET 10K (VCO)	

TUNER

Ref.No.	Part No.	Description	Remark
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< SWITCH >

S1	1-571-533-31	SWITCH, KEY BOARD (RADIO ON/OFF, BAND)	
S2	1-571-533-31	SWITCH, KEY BOARD (RESET)	
S3	1-570-204-21	SWITCH, KEY BOARD (ENTER)	
S4	1-570-204-21	SWITCH, KEY BOARD (SCAN +)	
S5	1-570-204-21	SWITCH, KEY BOARD (SCAN -)	
S6	1-571-275-31	SWITCH, SLIDE (FM MONO/ST)	

< TRANSFORMER >

T1	1-404-690-11	TRANSFORMER, IF (AM)	
T2	1-406-177-11	COIL (AM OSC)	
T3	1-449-021-21	TRANSFORMER, DC-DC CONVERTER	

< VIBRATOR >

X1	1-577-262-11	VIBRATOR, CRYSTAL (75KHz)	
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MISCELLANEOUS

23	1-641-663-11	PC BOARD, FLEXIBLE (GX51)	
130	1-638-313-11	PC BOARD, MOTOR FLEXIBLE	
HE901	1-543-657-11	HEAD, MAGNETIC (ERASE)	
HRP901	1-543-658-11	HEAD, MAGNETIC (REC/PB)	
L2	1-402-553-11	ANTENNA, FERRITE-ROD (MW) (GX51)	
M901	1-541-660-11	MOTOR	

ACCESSORIES & PACKING MATERIALS

	1-542-116-11	MICROPHONE	
*	3-372-556-01	INDIVIDUAL CARTON (GX50)	
*	3-372-563-01	INDIVIDUAL CARTON (GX51)	
*	3-372-558-01	CASE, ACCESSORY	
*	3-372-567-01	CUSHION	
	3-373-586-01	CASE, CARRYING (GX50)	
	3-373-604-01	CASE, CARRYING (GX51)	
	3-754-239-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (GX50)	
	3-754-239-41	MANUAL, INSTRUCTION (GERMAN, SPANISH) (GX50)	
	3-754-240-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (GX51)	
	3-754-240-41	MANUAL, INSTRUCTION (GERMAN, SPANISH) (GX51)	
	8-953-400-90	HEADPHONE MDR-E552 SET	
	9-911-839-XX	CUSHION, LOCK PLATE	
	X-3336-715-1	STAND ASSY, MICROPHONE	